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A Geno Technology, Inc. (USA) brand name

# **Safety Data Sheet**

Cat. # IT2885

# Immunotag<sup>™</sup> Human ZEB2 (Zinc finger E-box-binding homeobox 2) ELISA

Size: 1 96-well plate





Safety Data Sheet according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations Date of issue: 08/11/2017 Revision date: 10/16/2018 Version: 7.3

| SECTION 1: I                                                                                  | dentification              |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
|-----------------------------------------------------------------------------------------------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|----------------------------------------------------------------|
| 1.1. Identifi                                                                                 | cation                     |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| Product form                                                                                  |                            | : Article                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| Product name                                                                                  |                            | : ELISA Kits                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| Product code                                                                                  |                            | : ITXXXX                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| Other means of identification                                                                 |                            | (contains Proclin 300), Re<br>300), Recombinant Prote<br>Antibody Solution (Biotin<br>Diluent (Antibody Dilution<br>(SABC Dilution Reagent)                                                                                                                                                                                                | Coated Microtiter Plate, ELISA Detection Reagent (HRP-Streptavidin Conjugate (SABC)<br>(contains Proclin 300), Recombinant Protein Standard (Lyophilized Standard) (contains Proclin<br>300), Recombinant Protein Standard Diluent (Sample/Standard Dilution Buffer), Secondary<br>Antibody Solution (Biotin Detection Antibody) (contains Proclin 300), Secondary Antibody<br>Diluent (Antibody Dilution Buffer) (contains Proclin 300), ELISA Detection Reagent Diluent<br>(SABC Dilution Reagent)(contains Proclin 300), ELISA Detection Substrate (TMB Substrate)<br>(contains Tetramethylbenzidine), Wash Buffer [25X], Stop Solution (contains Sulfuric acid). |            |                                                                |
| 1.2. Recom                                                                                    | mended use and restriction | ons on use                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| No additional info                                                                            | mation available           |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| 1.3. Supplie                                                                                  | r                          |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| 9800 Page Avenu<br>Saint Louis, 6313<br>T 800-628-7730 -                                      | 2-1429 - United States     | iences.com                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| 1.4. Emerge                                                                                   | ency telephone number      |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| Emergency number : Chemtrec <b>1-800-424-9300</b> (USA/Canada), <b>+1-703-527-3887</b> (Intl) |                            |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| SECTION 2: H                                                                                  | lazard(s) identificati     | on                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| 2.1. Classifi                                                                                 | cation of the substance of | or mixture                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| GHS US classification<br>Not classified                                                       |                            |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| 2.2. GHS La                                                                                   | bel elements, including p  | precautionary statements                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| GHS US labeling                                                                               |                            |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| No labeling applic                                                                            | able                       |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| 2.3. Other h                                                                                  | azards which do not resu   | ult in classification                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| No additional info                                                                            |                            |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
|                                                                                               | vn acute toxicity (GHS US  | 3)                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| Not applicable                                                                                |                            |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
|                                                                                               | Composition/Informa        | tion on ingredients                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
|                                                                                               |                            | tion on ingredients                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| 3.1. Substa                                                                                   | nces                       |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| Not applicable                                                                                |                            |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| 3.2. Mixture                                                                                  | 5                          |                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |            |                                                                |
| Name                                                                                          |                            | Common Name (Synonyms)                                                                                                                                                                                                                                                                                                                     | Product identifier                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | %          | GHS US classification                                          |
| sulfuric acid<br>(Note B)                                                                     |                            | battery acid / BOV / brown acid /<br>brown oil of vitriol / dihydrogen<br>sulfate / dipping acid / electrolyte<br>acid / hydrogensulfate / matting<br>acid / mattling acid / nordhausen<br>acid / oil of vitriol / sulfate of<br>hydrogen / sulfuric acid,anhydrous<br>/ sulfuric-acid- / sulphuric acid /<br>vitriol / vitriol, brown oil | (CAS-No.) 7664-93-9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.05 - 0.5 | Skin Corr. 1A, H314<br>Carc. 1A, H350<br>Aquatic Acute 3, H402 |

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Note B : Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: 'nitric acid ... %'. In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a weight/weight basis.

Full text of hazard classes and H-statements : see section 16

| SECTIO                                                                        | ON 4: First-aid measures                                          |                                                                                                                                                           |  |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 4.1.                                                                          | Description of first aid measures                                 |                                                                                                                                                           |  |
| First-aid m                                                                   | neasures after inhalation :                                       | Remove person to fresh air and keep comfortable for breathing.                                                                                            |  |
| First-aid measures after skin contact : Wash skin with plenty of water.       |                                                                   |                                                                                                                                                           |  |
| First-aid measures after eye contact : Rinse eyes with water as a precaution. |                                                                   |                                                                                                                                                           |  |
| First-aid m                                                                   | neasures after ingestion :                                        | Call a poison center/doctor/physician if you feel unwell.                                                                                                 |  |
| 4.2.                                                                          | Most important symptoms and effects                               | (acute and delayed)                                                                                                                                       |  |
| No additio                                                                    | onal information available                                        |                                                                                                                                                           |  |
| 4.3.                                                                          | Immediate medical attention and spec                              | ial treatment, if necessary                                                                                                                               |  |
| Treat sym                                                                     | ptomatically.                                                     |                                                                                                                                                           |  |
| SECTIO                                                                        | ON 5: Fire-fighting measures                                      |                                                                                                                                                           |  |
| 5.1.                                                                          | Suitable (and unsuitable) extinguishin                            | g media                                                                                                                                                   |  |
| Suitable e                                                                    | extinguishing media :                                             | Water spray. Dry powder. Foam. Carbon dioxide.                                                                                                            |  |
| 5.2.                                                                          | Specific hazards arising from the cher                            | nical                                                                                                                                                     |  |
| No additio                                                                    | onal information available                                        |                                                                                                                                                           |  |
| 5.3.                                                                          | Special protective equipment and pred                             | cautions for fire-fighters                                                                                                                                |  |
| Protection                                                                    | n during firefighting :                                           | Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.                    |  |
| SECTIO                                                                        | ON 6: Accidental release measu                                    | ires                                                                                                                                                      |  |
| 6.1.                                                                          | Personal precautions, protective equip                            | pment and emergency procedures                                                                                                                            |  |
| 6.1.1.                                                                        | For non-emergency personnel                                       |                                                                                                                                                           |  |
| Emergenc                                                                      | cy procedures :                                                   | Ventilate spillage area.                                                                                                                                  |  |
| 6.1.2.                                                                        | For emergency responders                                          |                                                                                                                                                           |  |
|                                                                               | equipment :                                                       | Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". |  |
| 6.2.                                                                          | Environmental precautions                                         |                                                                                                                                                           |  |
| Avoid rele                                                                    | ease to the environment.                                          |                                                                                                                                                           |  |
| 6.3.                                                                          | Methods and material for containment                              | and cleaning up                                                                                                                                           |  |
| Methods f                                                                     | for cleaning up                                                   | Take up liquid spill into absorbent material.                                                                                                             |  |
| Other info                                                                    | ormation :                                                        | Dispose of materials or solid residues at an authorized site.                                                                                             |  |
| 6.4.                                                                          | Reference to other sections                                       |                                                                                                                                                           |  |
| For furthe                                                                    | r information refer to section 13.                                |                                                                                                                                                           |  |
| SECTIO                                                                        | ON 7: Handling and storage                                        |                                                                                                                                                           |  |
| 7.1.                                                                          | Precautions for safe handling                                     |                                                                                                                                                           |  |
| Precautior                                                                    | ns for safe handling :                                            | Ensure good ventilation of the work station. Wear personal protective equipment.                                                                          |  |
| Hygiene m                                                                     | neasures :                                                        | Do not eat, drink or smoke when using this product. Always wash hands after handling the product.                                                         |  |
| 7.2.                                                                          | 7.2. Conditions for safe storage, including any incompatibilities |                                                                                                                                                           |  |
| Storage co                                                                    | onditions :                                                       | Store in a well-ventilated place. Keep cool.                                                                                                              |  |
| SECTIO                                                                        | ON 8: Exposure controls/persor                                    | nal protection                                                                                                                                            |  |
| 8.1.                                                                          | Control parameters                                                |                                                                                                                                                           |  |
| ELISA K                                                                       | Kits                                                              |                                                                                                                                                           |  |
| No addit                                                                      | tional information available                                      |                                                                                                                                                           |  |

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| sulfuric acid (7664-93-9)                                         |                                                |  |  |
|-------------------------------------------------------------------|------------------------------------------------|--|--|
| USA - ACGIH - Occupational Exposur                                | e Limits                                       |  |  |
| ACGIH TWA (mg/m³)                                                 | 0.2 mg/m <sup>3</sup> (Thoracic fraction)      |  |  |
|                                                                   |                                                |  |  |
| 8.2. Appropriate engineering cont                                 | rols                                           |  |  |
| Appropriate engineering controls                                  | : Ensure good ventilation of the work station. |  |  |
| Environmental exposure controls                                   | : Avoid release to the environment.            |  |  |
| 3.3. Individual protection measures/Personal protective equipment |                                                |  |  |
|                                                                   |                                                |  |  |
| Hand protection:                                                  |                                                |  |  |
| Protective gloves                                                 |                                                |  |  |
| Eye protection:                                                   |                                                |  |  |
| Safety glasses                                                    |                                                |  |  |
|                                                                   |                                                |  |  |

#### Skin and body protection:

Wear suitable protective clothing

#### **Respiratory protection:**

In case of insufficient ventilation, wear suitable respiratory equipment

| SECTION 9: Physical and chemical properties |                     |  |  |
|---------------------------------------------|---------------------|--|--|
| 9.1. Information on basic physical and      | chemical properties |  |  |
| Physical state                              | : Liquid            |  |  |
| Color                                       | : No data available |  |  |
| Odor                                        | : No data available |  |  |
| Odor threshold                              | : No data available |  |  |
| рН                                          | : No data available |  |  |
| Melting point                               | : Not applicable    |  |  |
| Freezing point                              | : No data available |  |  |
| Boiling point                               | : No data available |  |  |
| Flash point                                 | : No data available |  |  |
| Relative evaporation rate (butyl acetate=1) | : No data available |  |  |
| Flammability (solid, gas)                   | : Not applicable.   |  |  |
| Vapor pressure                              | : No data available |  |  |
| Relative vapor density at 20 °C             | : No data available |  |  |
| Relative density                            | : No data available |  |  |
| Solubility                                  | : No data available |  |  |
| Log Pow                                     | : No data available |  |  |
| Auto-ignition temperature                   | : No data available |  |  |
| Decomposition temperature                   | : No data available |  |  |
| Viscosity, kinematic                        | : No data available |  |  |
| Viscosity, dynamic                          | : No data available |  |  |
| Explosion limits                            | : No data available |  |  |
| Explosive properties                        | : No data available |  |  |
| Oxidizing properties                        | : No data available |  |  |
| 9.2. Other information                      |                     |  |  |

No additional information available

### **SECTION 10: Stability and reactivity**

#### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

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|-------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|--|
| 10.2. Chemical stability                                    |                                                                                                                        |  |
| Stable under normal conditions.                             |                                                                                                                        |  |
|                                                             |                                                                                                                        |  |
| 10.3. Possibility of hazardous reactions                    |                                                                                                                        |  |
| No dangerous reactions known under normal cond              | litions of use.                                                                                                        |  |
| 10.4. Conditions to avoid                                   |                                                                                                                        |  |
| None under recommended storage and handling of              | conditions (see section 7).                                                                                            |  |
| 10.5. Incompatible materials                                |                                                                                                                        |  |
| No additional information available                         |                                                                                                                        |  |
| <b>10.6.</b> Hazardous decomposition products               |                                                                                                                        |  |
|                                                             |                                                                                                                        |  |
| Hazardous decomposition products.                           |                                                                                                                        |  |
| SECTION 11: Toxicological information                       | on                                                                                                                     |  |
| 11.1. Information on toxicological effects                  |                                                                                                                        |  |
| Acute toxicity (oral)                                       | : Not classified                                                                                                       |  |
| Acute toxicity (dermal)                                     | : Not classified                                                                                                       |  |
| Acute toxicity (inhalation)                                 | : Not classified                                                                                                       |  |
|                                                             |                                                                                                                        |  |
| sulfuric acid (7664-93-9)                                   | 2140 malka body weight /Bat Experimental value Oral)                                                                   |  |
| LD50 oral rat                                               | 2140 mg/kg body weight (Rat, Experimental value, Oral)<br>2140 mg/kg body weight                                       |  |
| ATE US (oral)                                               |                                                                                                                        |  |
| Skin corrosion/irritation                                   | Not classified                                                                                                         |  |
| Serious eye damage/irritation                               | : Not classified                                                                                                       |  |
| Respiratory or skin sensitization                           | : Not classified                                                                                                       |  |
| Germ cell mutagenicity                                      | : Not classified                                                                                                       |  |
| Carcinogenicity                                             | : Not classified                                                                                                       |  |
| sulfuric acid (7664-93-9)                                   |                                                                                                                        |  |
| National Toxicology Program (NTP) Status                    | Known Human Carcinogens                                                                                                |  |
| Reproductive toxicity                                       | : Not classified                                                                                                       |  |
|                                                             |                                                                                                                        |  |
| Specific target organ toxicity – single exposure            | : Not classified                                                                                                       |  |
| Specific target organ toxicity – repeated                   | : Not classified                                                                                                       |  |
| exposure                                                    |                                                                                                                        |  |
| A servertine to serve a                                     | Not developed                                                                                                          |  |
| Aspiration hazard                                           | Not classified                                                                                                         |  |
| Viscosity, kinematic                                        | : No data available                                                                                                    |  |
|                                                             |                                                                                                                        |  |
| SECTION 12: Ecological information                          |                                                                                                                        |  |
| 12.1. Toxicity                                              |                                                                                                                        |  |
| Ecology - general                                           | : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment. |  |
|                                                             |                                                                                                                        |  |
| sulfuric acid (7664-93-9)                                   |                                                                                                                        |  |
| LC50 fish 1                                                 | 42 mg/l (96 h, Gambusia affinis)                                                                                       |  |
| EC50 Daphnia 1                                              | 29 mg/l (24 h, Daphnia magna)                                                                                          |  |
| 12.2. Persistence and degradability                         |                                                                                                                        |  |
| sulfuric acid (7664-93-9)                                   |                                                                                                                        |  |
| Persistence and degradability                               | Biodegradability: not applicable.                                                                                      |  |
| Biochemical oxygen demand (BOD)                             | Not applicable                                                                                                         |  |
| Chemical oxygen demand (COD)                                | Not applicable                                                                                                         |  |
| ThOD                                                        | Not applicable                                                                                                         |  |
| BOD (% of ThOD) Not applicable                              |                                                                                                                        |  |
| (//////////////////////////////////                         | ····                                                                                                                   |  |
| 12.3. Bioaccumulative potential                             |                                                                                                                        |  |

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| sulfuric acid (7664-93-9)           |                        |  |
|-------------------------------------|------------------------|--|
| Log Pow                             | -2.2 (Estimated value) |  |
| Bioaccumulative potential           | Not bioaccumulative.   |  |
| 12.4. Mobility in soil              |                        |  |
| No additional information available |                        |  |

#### 12.5. Other adverse effects

No additional information available

| SECTION 13: Disposal considerations                                                                                                                          | S                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|
| 13.1. Disposal methods                                                                                                                                       |                            |
| Waste treatment methods                                                                                                                                      | : Waste treatment methods. |
| SECTION 14: Transport information                                                                                                                            |                            |
| Department of Transportation (DOT)                                                                                                                           |                            |
| In accordance with DOT                                                                                                                                       |                            |
| Not applicable                                                                                                                                               |                            |
| Transportation of Dangerous Goods                                                                                                                            |                            |
| Not applicable                                                                                                                                               |                            |
| Transport by sea                                                                                                                                             |                            |
| Not applicable                                                                                                                                               |                            |
| Air transport                                                                                                                                                |                            |
| Not applicable                                                                                                                                               |                            |
| SECTION 15: Regulatory information                                                                                                                           |                            |
| 15.1. US Federal regulations                                                                                                                                 |                            |
| sulfuric acid (7664-93-9)                                                                                                                                    |                            |
| Not listed on the United States TSCA (Toxic Substances Control Act) inventory<br>Not subject to reporting requirements of the United States SARA Section 313 |                            |
| Subject to reporting requirements of United State                                                                                                            |                            |
| CERCLA RQ                                                                                                                                                    | 1000 lb                    |
| RQ (Reportable quantity, section 304 of EPA's                                                                                                                | 1000 lb                    |

| CERCLA RQ                                             | 1000 lb |
|-------------------------------------------------------|---------|
| RQ (Reportable quantity, section 304 of EPA's         | 1000 lb |
| List of Lists)                                        |         |
| SARA Section 302 Threshold Planning<br>Quantity (TPQ) | 1000 lb |

### 15.2. International regulations

### CANADA

### **EU-Regulations**

### **National regulations**

| sulfuric acid (7664-93-9)                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------|
| Listed on IARC (International Agency for Research on Cancer)<br>Listed as carcinogen on NTP (National Toxicology Program) |
|                                                                                                                           |

15.3. US State regulations

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### **SECTION 16: Other information**

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| Revision date | : | 10/16/2018 |
|---------------|---|------------|
|               |   |            |

#### Full text of H-phrases:

| H314 | Causes severe skin burns and eye damage |
|------|-----------------------------------------|
| H350 | May cause cancer                        |
| H402 | Harmful to aquatic life                 |

#### SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.