

## MATERIAL SAFETY DATA SHEET

Cat. No. 31980

Version 3.0

Revision Date 14/08/2020

<b>SECTION 1. IDENTIFICATION</b>	
<b>Product:</b>	Human GDF-15 ELISA Kit
<b>Manufacturer:</b>	<b>ImmunoDiagnostics Limited</b> Rm 513, 5/F, Biotech Centre 2, No. 11 Science Park West Avenue, Hong Kong Science Park, NT, Hong Kong
<b>Tel:</b>	(+852) 3502 2780/ Fax: (+852) 3502 2781
<b>Email:</b>	<a href="mailto:info@immunodiagnostics.com.hk">info@immunodiagnostics.com.hk</a>
<b>Emergency phone number:</b>	Please contact your local Poison Control Centre Australia – 131126 New Zealand – (0)34747000 United States – 1800 222 1222
<b>Recommended use:</b>	This product is for laboratory research use only and is not intended for human/animal diagnostics, therapeutic or any other clinical uses

### 2. INFORMATION ON PRODUCT/PREPARATION COMPOSITION

The product contains the following hazardous substances and those with the following highest permissible concentrations in the working environment:

#### 2.1. Microtiter strips (96 wells, Coated with a polyclonal antibody against human GDF-15, sealed)

Identification numbers	Chemical name of substance	Concentrations	Risk and safety statements
CAS: None EC (EINECS): None	None		

#### 2.2. Standard (recombinant human GDF-15 in a buffered protein base, lyophilised)

Identification numbers	Chemical name of substance	Concentrations	Risk and safety statements
CAS: None EC (EINECS): None	None		

#### 2.3. Detection Antibody Solution (A biotin labelled polyclonal antibody against human GDF-15)

Identification numbers	Chemical name of substance	Concentrations	Risk and safety statements
CAS: None	None		

EC (EINECS): None			
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#### 2.4. STP-HRP (Streptavidin –HRP conjugate in peroxidase buffer)

Identification numbers	Chemical name of substance	Concentrations	Risk and safety statements
CAS: None EC (EINECS): None	None		

#### 2.5. Assay buffer concentrate

Identification numbers	Chemical name of substance	Concentrations	Risk and safety statements
CAS: None EC (EINECS): None	None		

#### 2.6. Wash buffer concentrate

Identification numbers	Chemical name of substance	Concentrations	Risk and safety statements
CAS: None EC (EINECS): None	None		

#### 2.7. Substrate solution

Identification numbers	Chemical name of substance	Concentrations	Risk and safety statements
CAS: 54827-17-7 EC (EINECS): 259-364-6 S26-36/37	3,3',5,5'-Tetramethylbenzidine	0.4 g/L	R20/21/22-36/37/38-40, S26-36/37

#### 2.8. Stop solution

Identification numbers	Chemical name of substance	Concentrations	Risk and safety statements
CAS: 7664-93-9 EC (EINECS):231-639-5	Sulfuric acid	2 N	C, R35, S26-30-45

#### Risk symbols

C Corrosive

#### Risk phrases

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed

R21/22 Harmful in contact with skin and if swallowed

R22 Harmful if swallowed

R35 Cause severe burns

R36/37/38 Irritating to eyes, respiratory system and skin

R40 Possible risk of irreversible effects

**Safety phrases**

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S30 Never add water to this product

S36/37 Wear suitable protective clothing and gloves

S45 In case of accident or if you feel unwell, seek medical advice immediately (show label where possible)

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**3. SUBSTANCE/PREPARATION HAZARDS DATA**

The amount of dangerous substance is under the limit on which the kit is considered dangerous as a whole.

**When used, the most adverse impacts of the substance/preparation on human health include:**

The followed components can damage health if ingested and/or can irritate eyes and skin: Stop solution, Substrate solution.

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**4. FIRST AID MEASURES****Eye Contact:**

Check for and remove contact lenses. Flush eyes with water for at least 15 minutes. Get medical attention.

**Skin contact:**

Wash skin thoroughly with soap and water. Remove and wash contaminated clothing. Should irritation occur get medical attention.

**Inhalation:**

If inhaled remove to fresh air. If breathing is affected seek medical attention.

**Ingestion:**

Flush out mouth and drink large amounts of water. Seek medical attention if symptoms appear.

**Wounds:**

Allow to bleed freely. Wash thoroughly with soap and water. Get medical attention.

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**5. FIRE FIGHTING MEASURES**

**Suitable fire-extinguishing media:** Carbon dioxide, dry powder, foam, water.

**Thermal decomposition:** No thermal decomposition degradation products are expected.

**Special hazards:** None.

**Special protective means for firemen:** None.

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**6. ACCIDENTAL RELEASE MEASURES**

**Safety measures to protect humans:** Avoid contact with skin and eyes.

**Environmental safety measures:** Avoid penetration into sewerage systems, surface and ground water. Avoid soil pollution.

**Recommended cleaning and disposal methods:** Cover with suitable absorbing material. After removing the substance, rinse the spot of spilling thoroughly with water and soap.

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## 7. HANDLING AND STORAGE

**Handling instructions:** Avoid contact with skin, eyes and clothing. Use suitable protective means to work with the substance.

**Storage instructions:** Store at temperatures between + 2 and + 8°C in a dry and dark place.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Technical measures:** Do not eat, drink and smoke when working with the kit. Use the kit only in rooms enabling good ventilation. Local exhaustion is necessary, general (forced) exhaustion is recommended.

**Personal protective means – protection of respiratory organs:** None

**Personal protective means – eye protection:** None

**Personal protective means – hand protection:** Protective gloves (wash your hands before and after work)

**Personal protective means – body protection:** Protective clothing

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Melting point/freezing point: -40°C

Boiling point/Boiling range: 189°C

Flash point: 118°C – closed cup

Evaporation rate: Not available

Flammability (solid, gas): Not available

Upper/lower flammability or explosive limits: Not available

Vapor density: Not available

Vapor pressure: Not available

Auto igniting: Not available

Decomposition temperature: Not available

Viscosity: Not available

**State (at 20°C):**

Solid: Microtiter strips, standard

Liquids: Biotin labeled antibody solution, STP-HRP, Assay buffer concentrate, Wash buffer concentrate, Substrate solution, Stop solution

**Color:**

Yellow: STP-HRP, Assay buffer concentrate.

Colorless: Biotin labeled antibody solution, Stop solution, Wash buffer concentrate, Substrate solution.

**pH value (at 25°C):**

Stop solution: < 1

Others: 6.8 - 7.4

## 10. STABILITY AND REACTIVITY

**Conditions to be avoided:** Heat

**Substances and materials with which the product is not allowed to get in touch:**

Acids

**Hazardous decomposition products:** Not known

## 11. TOXICOLOGICAL INFORMATION

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### **Toxicological information**

The product contains sulfuric acid in total concentration of 2N.

**Acute toxicity-LD50 orally, rat (mg/kg):** 2140mg/kg – sulfuric acid

**Irritability:** No data available

**Mutagenicity:** No data available

**Reproduction toxicity:** No data available

**Tests on animals:** No data available

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## 12. ECOLOGICAL INFORMATION

Water hazard class: 2 (water-damaging substances)

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## 13. DISPOSAL CONSIDERATIONS

### **The manner of disposing the substance/preparation:**

Mix or dissolve the material in a combustible solvent and burn up in a facility whose equipment matches all regulations in effect. Every waste disposal must be carried out in coincidence with national and local legislation or administrative regulations respectively.

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## 14. TRANSPORT INFORMATION

**Overland transportation (ADR/RID):** As a mixture, the substance is subject to no limitations.

**Transatlantic transportation (IMDG):** As a mixture, the substance is subject to no limitations.

**Air transportation (ICAO/IATA):** As a mixture, the substance is subject to no limitations.

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## 15. INFORMATION ON LEGAL REGULATIONS

According to the Act No. 356/2003 Coll. on chemical substances and chemical preparations and on amendments in some other laws and acts, components contained in the Human GDF-15 ELISA Kit are non-hazardous substances in said concentrations. Human GDF-15 ELISA Kit is subject to special marking regulations according to the EC regulations (28/10/1999).

Human GDF-15 ELISA Kit: R20/21/22-21/22-22-35-36/37/38-40 S26-30-36/37-45

## 16. OTHER INFORMATION

*The material safety data sheet contains data necessary to ensure safety and health and environmental protection in working with chemical substances. The above-stated data match the contemporary state of knowledge and experience and are in coincidence with legal regulations currently in effect. This product is a chemical substance and can be solely used by persons with chemical education at their own risk.*

*Human GDF-15 ELISA Kit is designed for biomedical research. The manufacturer has no responsibility for damage caused by unsuitable use and by disrespecting the enclosed working instructions.*

*The above-stated information cannot be considered as complete and must be understood to be only a methodical instruction.*