

## MATERIAL SAFETY DATA SHEET

Cat. No. 33380

Version 3.0

Revision Date 14/08/2020

<b>SECTION 1. IDENTIFICATION</b>	
<b>Product:</b>	Ultrasensitive rat insulin immunoassay 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 monoclonal antibody against insulin, sealed)

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

#### 2.2. Standard (recombinant insulin, liquid)

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

#### 2.3. HRP Labeled Antibody Solution (A monoclonal antibody against insulin conjugated with horseradish peroxidase, in phosphate buffer solution)

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

EC (EINECS): None			
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#### 2.4. Assay buffer

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

#### 2.5. Wash buffer concentrate

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

#### 2.6. 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

#### 2.7. Stop solution

Identification numbers	Chemical name of substance	Concentrations	Risk and safety statements
CAS: 7664-93-9 EC (EINECS):231-639-5	Sulfuric acid	0.5 M	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

Liquids: HRP labeled antibody Solution, Standards, Assay buffer, Wash buffer concentrate, Substrate solution, Stop solution

**Color:**

Yellow: HRP labeled antibody solution, Standards, Assay buffer.

Colorless: 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

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## 11. TOXICOLOGICAL INFORMATION

**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 Ultrasensitive rat insulin immunoassay kit are non-hazardous substances in said concentrations. Ultrasensitive rat insulin immunoassay kit is subject to special marking regulations according to the EC regulations (28/10/1999).

Ultrasensitive Rat insulin immunoassay kit: R20/21/22-21/22-22-35-36/37/38-40  
S26-30-36/37-45

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## **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. Ultrasensitive rat insulin immunoassay 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.*