

## MSDS: 8-Hydroxy-2'-Deoxyguanosine Assay Kit Product No. FR08

This product, FR08 – 8-Hydroxy-2'-Deoxyguanosine Assay Kit, is provided and produced by Oxford Biomedical Research as an in vitro diagnostic test kit for the sole purpose of research use.

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### MANUFACTURER

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### SECTION 1 - HAZARDOUS COMPONENTS

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Component:	Hazardous Content:
8-OhdG Microtiter Plate	Name: 8-Hydroxy-2'-Deoxyguanosine CAS #: 88847-89-6 MF: C <sub>10</sub> H <sub>13</sub> N <sub>5</sub> O <sub>5</sub>
Chromogen	Name: 3,3',5,5'-Tetramethylbenzidine (TMB) CAS #: 54827-17-7 MF: C <sub>16</sub> H <sub>20</sub> N <sub>2</sub>
Chromogen Dilution Buffer	Name: Sodium Azide (0.1%) CAS #: 26628-22-8 MF: NaN <sub>3</sub>
Primary Antibody	Name: Hydrogen Peroxide, (0.1%) CAS #: 7722-84-1 MF: H <sub>2</sub> O <sub>2</sub>
	Name: Citrate-Phosphate Buffered Saline CAS #: N/A MF: N/A
	Name: Sodium Azide (0.1%) CAS #: 26628-22-8 MF: NaN <sub>3</sub>
	Name: Anti 8-OHdG Mouse Monoclonal Antibody (Type:IgG1) CAS #: N/A MF: Unknown
	Name: Polyoxyethylene (20) Sorbitan Monolaurate CAS #: 9005-64-5 MF: C <sub>58</sub> H <sub>114</sub> O <sub>26</sub>

Primary Antibody Dilution Buffer	Name:	Phosphate Buffered Saline
	CAS #:	None
	MF:	N/A
	Name:	Sodium Azide (0.1%)
	CAS #:	26628-22-8
	MF:	NaN <sub>3</sub>
Secondary Antibody	Name:	HRP Conjugated Antibody
	CAS #:	N/A
	MF:	Unknown
Secondary Antibody Dilution Buffer	Name:	Phosphate Buffered Saline
	CAS #:	None
	MF:	N/A
	Name:	Sodium Azide
	CAS #:	26628-22-8
	MF:	NaN <sub>3</sub>
Standards 1-6	Name:	8-Hydroxy-2'-Deoxyguanosine
	CAS #:	88847-89-6
	MF:	C <sub>10</sub> H <sub>13</sub> N <sub>5</sub> O <sub>5</sub>
	Name:	Sodium Azide (0.1%)
	CAS #:	26628-22-8
	MF:	NaN <sub>3</sub>
Stop Solution	Name:	Phosphoric Acid (1 M)
	CAS #:	7664-38-2
	MF:	H <sub>3</sub> O <sub>4</sub> P
	Name:	Sodium Azide (0.1%)
	CAS #:	26628-22-8
	MF:	NaN <sub>3</sub>
Wash Buffer	Name:	Phosphate Buffered Saline
	CAS #:	None
	MF:	N/A
	Name:	Polyoxyethylene (20) Sorbitan Monolaurate
	CAS #:	9005-64-5
	MF:	C <sub>58</sub> H <sub>114</sub> O <sub>26</sub>
	Name:	Sodium Azide (0.1%)
	CAS #:	26628-22-8
	MF:	NaN <sub>3</sub>

**SECTION 2 - PHYSICAL AND CHEMICAL CHARACTERISTICS****3,3',5,5'-Tetramethylbenzidine (TMB)**

Melting Point:	168–169°C	Water Solubility:	Soluble
Specific Gravity:	N/A	Reactivity in Water:	N/A
Vapor Pressure:	N/A	Appearance:	White to Yellow Powder
Vapor Density:	N/A	Odor:	N/A

**8-Hydroxy-2'-Deoxyguanosine**

Boiling Point:	N/A	Water Solubility:	<50 µg/mL @ 25°C
Specific Gravity:	N/A	Reactivity in Water:	N/A
Vapor Pressure:	N/A	Appearance:	Crystalline Solid
Vapor Density:	N/A	Odor:	N/A

**Citrate-Phosphate Buffered Saline**

Boiling Point:	N/A	Water Solubility:	Soluble
Specific Gravity:	N/A	Reactivity in Water:	N/A
Vapor Pressure:	N/A	Appearance:	Liquid
Vapor Density:	N/A	Odor:	Odorless

**Hydrogen Peroxide (30%)**

Boiling Point:	106°C	Water Solubility:	Miscible
Specific Gravity:	1.11	Reactivity in Water:	N/A
Vapor Pressure:	24.8 mm Hg	Appearance:	Colorless Liquid
Vapor Density:	1.0	Odor:	Slight Odor

**Phosphate-Buffered Saline**

Boiling Point:	N/A	Water Solubility:	Soluble
Specific Gravity:	N/A	Reactivity in Water:	N/A
Vapor Pressure:	N/A	Appearance:	Liquid
Vapor Density:	N/A	Odor:	Odorless

**Phosphoric Acid**

Boiling Point:	261°C	Water Solubility:	Miscible
Specific Gravity:	1.69	Reactivity in Water:	N/A
Vapor Pressure:	0.0285 mm Hg	Appearance:	Colorless Liquid
Vapor Density:	N/A	Odor:	Odorless

**Polyoxyethylene (20) Sorbitan Monolaurate**

Boiling Point:	N/A	Water Solubility:	Soluble
Specific Gravity:	1.080	Reactivity in Water:	N/A
Vapor Pressure:	N/A	Appearance:	Yellowish Clear Liquid
Vapor Density:	N/A	Odor:	N/A

**Sodium Azide**

Boiling Point:	N/A	Water Solubility:	Soluble
Specific Gravity:	1.846	Reactivity in Water:	N/A
Vapor Pressure:	N/A	Appearance:	White Crystalline Powder
Vapor Density:	N/A	Odor:	N/A

**SECTION 3 - FIRE AND EXPLOSION HAZARD DATA****3,3',5,5'-Tetramethylbenzidine (TMB)**

Flash Point:	N/A	Auto-Ignition Temperature:	N/A
Flammable Limits:	N/A	Extinguisher Media:	CO <sub>2</sub> , Dry Chemical, Foam, H <sub>2</sub> O

**8-Hydroxy-2'-Deoxyguanosine**

Flash Point:	N/A	Auto-Ignition Temperature:	N/A
Flammable Limits:	N/A	Extinguisher Media:	CO <sub>2</sub> , Dry Chemical, Foam, H <sub>2</sub> O

**Citrine-Phosphate Buffered Saline**

Flash Point:	N/A	Auto-Ignition Temperature:	N/A
Flammable Limits:	N/A	Extinguisher Media:	CO <sub>2</sub> , Dry Chemical, Foam, H <sub>2</sub> O

**Hydrogen Peroxide (30%)**

Flash Point:	N/A	Auto-Ignition Temperature:	N/A
Flammable Limits:	N/A	Extinguisher Media:	H <sub>2</sub> O

**Phosphate Buffered Saline**

Flash Point:	N/A	Auto-Ignition Temperature:	N/A
Flammable Limits:	N/A	Extinguisher Media:	CO <sub>2</sub> , Dry Chemical, Foam, H <sub>2</sub> O

**Phosphoric Acid**

Flash Point:	N/A	Auto-Ignition Temperature:	N/A
Flammable Limits:	N/A	Extinguisher Media:	CO <sub>2</sub> , Dry Chemical, Foam, H <sub>2</sub> O

**Polyoxyethylene (20) Sorbitan Monolaurate**

Flash Point:	321°C	Auto-Ignition Temperature:	N/A
Flammable Limits:	N/A	Extinguisher Media:	CO <sub>2</sub> , Dry Chemical, Foam, H <sub>2</sub> O

**Sodium Azide**

Flash Point:	N/A	Auto-Ignition Temperature:	321°C
Flammable Limits:	N/A	Extinguisher Media:	CO <sub>2</sub> , Dry Chemical, Foam, H <sub>2</sub> O

**SECTION 4 – REACTIVITY HAZARD AND STORAGE DATA****3,3',5,5'-Tetramethylbenzidine (TMB)**

Stability:	Stable
Incompatibilities:	Protect from light and moisture. Avoid contact with metals, strong acids and strong oxidizing agents.
Storage Conditions:	Store under Nitrogen. Hygroscopic. Store tightly capped in the dark at room temperature, preferably cool.
Hazardous Decomposition Products:	Carbon Monoxide, Carbon Dioxide, Nitrogen Oxides
Hazardous Polymerization:	Will not occur.

**8-Hydroxy-2'-Deoxyguanosine**

Stability:	Stable
Incompatibilities:	Extremely acidic conditions may cause this compound to deglycosilate.
Storage Conditions:	Store tightly capped.
Hazardous Decomposition Products:	N/A
Hazardous Polymerization:	Will not occur.

**Citrate-Phosphate Buffered Saline**

Stability: Stable  
Incompatibilities: Oxidizers, Acids  
Storage Conditions: Store tightly capped in the dark at room temperature.  
Hazardous Decomposition Products: Phosphor Oxides, Sodium Compounds  
Hazardous Polymerization: Will not occur.

**Hydrogen Peroxide (30%)**

Stability: Stable  
Incompatibilities: Reducing Agents, Organic, Combustible Materials, Metal Powders, Strong Alkalis  
Storage Conditions: Store loosely capped in the dark at room temperature.  
Hazardous Decomposition Products: Oxygen  
Hazardous Polymerization: Will not occur.

**Phosphate Buffered Saline**

Stability: Stable  
Incompatibilities: Oxidizers, Acids  
Storage Conditions: Store tightly capped in the dark at room temperature.  
Hazardous Decomposition Products: Phosphor Oxides, Sodium Compounds  
Hazardous Polymerization: Will not occur.

**Phosphoric Acid**

Stability: Stable  
Incompatibilities: Alkalis, Metals, Aldehydes, Cyanide Compounds, Mercaptans, Sulfides, Epoxides, Azo Compounds, Polymerizable Compounds  
Storage Conditions: Hygroscopic. Store tightly capped in the dark at room temperature.  
Hazardous Decomposition Products: N/A  
Hazardous Polymerization: Will not occur.

**Polyoxyethylene (20) Sorbitan Monolaurate**

Stability: Stable  
Incompatibilities: Strong Acids  
Storage Conditions: Store tightly capped.  
Hazardous Decomposition Products: Not known.  
Hazardous Polymerization: Will not occur.

**Sodium Azide**

Stability: Stable  
Incompatibilities: Strong Oxidizers, Acids, Heavy Metals, Aluminum, Dibromomalononitrile, Nitric Acid, Dimethyl Sulfate, Benzyl Chloride, Potassium Hydroxide, Bromine, Carbon Disulfate, Chromyl Chloride  
Storage Conditions: Store tightly capped in the dark at room temperature.  
Hazardous Decomposition Products: Nitrogen Oxides, Nitrogen Gas, Sodium Compounds  
Hazardous Polymerization: Will not occur.

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**SECTION 5 - HEALTH HAZARD DATA**

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**3,3',5,5'-Tetramethylbenzidine (TMB)**

Exposure Limits: N/A  
Toxicity Data: ORL-QAL LD50: >316 mg/kg  
The toxicological properties of this material have not been thoroughly investigated.  
Health Hazards: May be harmful by inhalation, ingestion, or skin absorption. Irritating to skin, eyes, mucous membranes, and upper respiratory tract.  
First Aid: Seek immediate medical attention if swallowed. In case of contact with eyes or skin, flush with plenty of water and seek medical attention. If inhaled, expose to fresh air and seek medical attention.

**8-Hydroxy-2'-Deoxyguanosine**

Exposure Limits: None Established  
Toxicity Data: The toxicological properties of this material have not been thoroughly investigated.  
Health Hazards: Irritating to skin, eyes, nose, throat, and respiratory tract.  
First Aid: Seek immediate medical attention if swallowed. In case of contact with eyes or skin, flush with plenty of water and seek medical attention. If inhaled, expose to fresh air and seek medical attention.

**Citrate-Phosphate Buffered Saline**

Exposure Limits: None Established  
Toxicity Data: Irritant  
Health Hazards: May be harmful by inhalation, ingestion, or skin absorption. Irritating to skin, eyes, mucous membranes, and upper respiratory tract.  
First Aid: Seek immediate medical attention if swallowed. In case of contact with eyes or skin, flush with plenty of water and seek medical attention. If inhaled, expose to fresh air and seek medical attention.

**Hydrogen Peroxide (30%)**

Exposure Limits: 1 ppm, 1.4 mg/m<sup>3</sup>  
Toxicity Data: Harmful - Oxidizer - Corrosive  
Health Hazards: May be harmful by inhalation, ingestion, or skin absorption.  
First Aid: Seek immediate medical attention if swallowed. In case of contact with eyes or skin, flush with plenty of water and seek medical attention. If inhaled, expose to fresh air and seek medical attention.

**Phosphoric Acid**

Exposure Limits: 1 m  
Toxicity Data: Reactive - Corrosive - Irritant  
Health Hazards: May be harmful by inhalation, ingestion, or skin absorption.  
First Aid: Seek immediate medical attention if swallowed. In case of contact with eyes or skin, flush with plenty of water and seek medical attention. If inhaled, expose to fresh air and seek medical attention.

**Phosphate Buffered Saline**

Exposure Limits: None Established  
Toxicity Data: Irritant  
Health Hazards: May be harmful by inhalation, ingestion, or skin absorption. Irritating to skin, eyes, mucous membranes, and upper respiratory tract.  
First Aid: Seek immediate medical attention if swallowed. In case of contact with eyes or skin, flush with plenty of water and seek medical attention. If inhaled, expose to fresh air and seek medical attention.

**Polyoxyethylene (20) Sorbitan Monolaurate**

Exposure Limits: None Established  
Toxicity Data: Irritant  
Health Hazards: May be harmful by inhalation, ingestion, or skin absorption.  
First Aid: Seek immediate medical attention if swallowed. In case of contact with eyes or skin, flush with plenty of water and seek medical attention. If inhaled, expose to fresh air and seek medical attention.

**Sodium Azide**

Exposure Limits: None Established  
Toxicity Data: Toxic  
Health Hazards: May be fatal by inhalation or ingestion. May be harmful if absorbed.  
First Aid: Seek immediate medical attention if swallowed. In case of contact with eyes or skin, flush with plenty of water and seek medical attention. If inhaled, expose to fresh air and seek medical attention.

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**SECTION 6 – SPECIAL PROTECTION INFORMATION**

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Respiratory Protection: Do not breath vapors.  
Ventilation: Requires local exhaust.  
Protective Gloves: Proper disposable gloves.  
Eye Protection: Safety glasses or goggles.  
Other Protective Equipment: Uniform, lab coat, or disposable lab wear.  
Work/Hygienic Practices: Follow usual precautionary measures for handling chemicals. Keep away from food and beverages.

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**SECTION 7 - HANDLING AND USE PRECAUTIONS**

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Accidental Release Measures: Wear suitable protective equipment to prevent inhalation, ingestion, or skin and eye contact. Cover spills with sand, soda ash, or dry-lime.  
Waste Disposal: Disposal shall be in accordance with local, state, or federal guidelines.  
Handling and Storage: 4-8°C

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