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SAFETY DATA SHEET

Version 3
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name HER2 Colorimetric

Catalog number OKAG00772

Recommended use Research use only

Supplier address Aviva Systems Biology
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2. HAZARDS IDENTIFICATION

Potential hazards

Some kit reagents are not considered to be hazardous according to 29CFR 1910.1200(d). They are mixtures that contain less than 1% hazardous chemicals and less than 0.1% carcinogenic chemicals. All potential hazards are listed below:

α -target antibody, α -phospho-target antibody, α -GAPDH antibody: < 0.1% Sodium azide

10X TBS: 1% Kathon CG/ICP

15X Wash buffer: 0.3% Kathon CG/ICP, 1.5% Tween-20

HRP-conjugated antibodies: 0.2% Kathon CG/ICP, 0.1% Tween-20

SDS solution: 1% Sodium Dodecyl Sulfate (SDS)

Blocking buffer: 0.5% Triton X-100, 0.1% Tween-20

Primary antibody diluent: 1% Kathon CG/ICP, 0.5% Triton X-100, 0.1% Tween-20

Quenching buffer: 1% Hydrogen peroxide (H₂O₂)

Crystal violet solution: 0.05% crystal violet

Ready-to-use substrate: < 0.02% hydrogen peroxide and < 0.1% 3,3',5,5'-Tetramethylbenzidine (TMB)

Stop solution: 2N Sulfuric acid (H₂SO₄)

Classification of the substance or mixture

Crystal violet: Carcinogen (2); Eye and skin irritant; Flammable liquid; Toxic by inhalation, ingestion, and skin absorption); Organ Damage (Eyes, Heart, Kidney, Liver, Nerves).

Hydrogen peroxide: Carcinogen; Corrosive; Flammable Oxidizer; Organ Damage (Eyes, Respiratory system, Skin); Toxic by ingestion.

Kathon CG: Carcinogen; Corrosive; Flammable Oxidizer; Harmful by ingestion; Harmful if inhaled and extremely destructive of tissues of mucous membranes and upper respiratory tract; Organ Damage (Blood, Central Nervous System, Eye, Gastrointestinal tract, Kidney); Skin and respiratory sensitizer (causes allergies).

SDS: Flammable Solid; Organ Damage (Eyes and Lungs); Skin Irritant; Toxic by ingestion and skin absorption.

Sodium azide: May react with lead and copper plumbing to form highly explosive metal azides; Highly toxic by ingestion and skin absorption; Organ Damage (Brain, Central nervous system, Heart).

Sulfuric acid: Corrosive; Organ Damage (Eyes, Lungs, and Teeth).

Triton X-100: Toxic by ingestion; Organ Damage (Eyes); Skin Irritant.

Tween-20: Toxic by inhalation, ingestion, and skin absorption. May cause eye, skin, or respiratory system irritation.

GHS label elements, including precautionary statements

Hazard pictograms				
Signal word/s	Warning	Danger	Danger	Danger

Hazard statements

Keep away from clothing and combustible materials. Avoid breathing the fumes and vapors from kit components. Wear protective gloves, clothing, eyewear, and face

protection.

Routes of entry: Avoid ingestion and inhalation; avoid contact with skin and eyes.

Threshold limit value and source: The chemical, physical and toxicological properties of these components have not been thoroughly investigated. Allergy-prone individuals should be particularly cautious with proteins or other materials of biological origin.

Carcinogenic effects data: Not available

Chronic effects of overexposure: Not available

Solubility in water: Liquids except detergents are readily miscible in water.

Hazards not otherwise classified (HNOC) or not covered by GHS – none

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS numbers/other identifiers

Chemical Name	CAS-No	Weight %
Sodium azide	26628-22-8	<0.1
Kathon CG/ICP	7664-93-9	2.5
Tween-20	7732-18-5	1.8
Sodium Dodecyl Sulfate (SDS)	151-21-3	1
Triton X-100	9002-93-1	1
Hydrogen peroxide	7722-84-1	1
Crystal violet	548-62-9	0.05
3,3',5,5'-Tetramethylbenzidine (TMB)	54827-17-7	0.1
Sulfuric acid	7664-93	<2

4. FIRST AID MEASURES

Eye contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Inhalation

Move to fresh air

Ingestion

Clean mouth with water. Drink plenty of water.

Notes to physician

Treat symptomatically.

5. FIREFIGHTING MEASURES

Flammable properties

Not flammable

Flash point

No determined

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Explosion Data**Sensitivity to mechanical Impact**

None

Sensitivity to static discharge

None

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation.

Environmental precautions

Try to prevent the material from entering drains or water courses.

Methods and materials for containment and cleaning up

Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE**Handling**

Handle in accordance with good industrial hygiene and safety practice.

Storage

Store the entire kit at 4°C upon arrival.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Exposure guidelines**

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering measures

Showers

Eyewash stations

Ventilation systems

Personal protective equipment

Eye/face protection

No special protective equipment required.

Skin protection

No special protective equipment required.

Body protection

No special protective equipment required.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Form: liquid
Odour	No data available
Odour threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	No data available
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

10. STABILITY AND REACTIVITY

Stability

Stable under recommended storage conditions.

Incompatible products

None known based on information supplied.

Conditions to avoid

None known based on information supplied.

Hazardous decomposition products

None known based on information supplied.

Hazardous polymerization

Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Aspiration hazard

No data available

12. ECOLOGICAL INFORMATION**Ecotoxicity**

The environmental impact of this product has not been fully investigated.

13. DISPOSAL CONSIDERATIONS**Product**

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

15. REGULATORY INFORMATION

U.S. federal regulations

SARA 302/313 components

The following components are subject to reporting levels established by SARA Title III, Section 302/313:

Chemical Name	CAS-No	Weight %
Sodium azide	26628-22-8	<0.1
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Sodium Dodecyl Sulfate (SDS)	151-21-3	1
Triton X-100	9002-93-1	1
Hydrogen peroxide	7722-84-1	1
Crystal violet	548-62-9	0.05
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Sulfuric acid	7664-93	<2

SARA 311/312 hazard categories

Acute health hazard	no
Chronic health hazard	no
Fire hazard	no
Sudden release of pressure hazard	no
Reactive hazard	no

Clean water act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

California proposition 65

This product does not contain any Proposition 65 chemicals.

16. OTHER INFORMATION**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.