

HRP Fluorescent Substrate System (Catalog# TBS5026)

For Fluorometric HRP-based quantitative detection

Description

10-Acetyl-3,7-dihydroxyphenoxazine (ADHP), also called Amplex[®] Red and Ampliflu[™] Red, is not only a sensitive and stable fluorogenic substrate for horseradish peroxidase (HRP) but also an ultrasensitive probe for H₂O₂. In the presence of HRP and H₂O₂, ADHP generates highly fluorescent resorufin that has maximum absorption of 570 nm and maximum emission of 585 nm. So far ADHP has been known as the most sensitive and stable fluorogenic probe for detecting HRP and H₂O₂. ADHP has been widely used to detect HRP in many immunoassays. The ADHP Liquid Substrate System combines ADHP and buffer in a single solution, ready-to-use reagent for use in procedures detecting horseradish peroxidase enzyme activity in liquid system or ELISA. Fluorescence can be measured with excitation at 535 nm and emission at 585 nm. This substrate is about 10 times more sensitive than the horseradish peroxidase substrate TMB.

Application:

- **HRP substrate** – for detection of horseradish peroxidase activity on liquid system.
- Available for western blot.
- Custom packaging and bulk purchase information is available upon request.

KIT CONTENTS

ADHP solution 20 mL Developer 50μL
HRP standard 100 μL 50 U/L

Storage:

Supplied as a ready to use solution, 20 mL.
Store at 2-8°C. Protect from light for up to one year.

Procedure:**HRP activity**

Warm up ADHP solution to room temperature. Prepare enough ADHP working solution by add 1μL developer into 1mL ADHP solution.

1. Prepare samples and HRP standards according to your established procedures.
2. To each sample and HRP standard, add 50 μL of ADHP working solution. This quantity should be determined experimentally and depends on the cuvette or multiwell plate used. Commonly 1mL for 1cm cuvettes or 50μL per well of a multiwell plate is required for ELISAs..
3. Record the fluorometric values (Ex535nm/Em585nm) for each sample and HRP standard at the desired intervals (kinetics assay) or upon termination of the reaction (endpoint assay).
4. Prepare HRP standard curve by plot of the concentrations (or amounts) of the HRP standards v. fluorometric values.
5. Using the fluorometric value for each sample, determine the HRP concentration by extrapolation on the standard curve generated in Step 4.

RELATED PRODUCTS:

NCIP/NBT Substrate System (Catalog# TBS5022)

TMB Substrate System (Catalog# TBS5021)

ALP Fluorescent Substrate system (Catalog # TBS5025)

Material Safety Data Sheet (MSDS)

Identification:**Product name:** HRP Fluorescent Substrate System**Product Catalog:** TBS5026**Manufacturer Supplier:**4062 Fabian Way, suite 1, Palo Alto,
CA 94303 USA

1-650-917-9269 TEL

1-650-618-5498 FAX

Composition/Information on Ingredients:

This product is For Research Use Only. According to 29 CFR 1910.1200(d), mixtures with hazardous ingredients at less than <1% and carcinogens at less than < 0.1% are considered non-hazardous.

Ingredient Name	CAS#	Percent
10-Acetyl-3,7-dihydroxyphenoxazine	119171-73-2	<0.01%
Hydrogen Peroxide	7722-84-1	<3%
Horseradish peroxidase	9003-99-0	na

Hazard Identification:

CAUTION: This product is not for use in humans. It is intended for research purposes only. To the best of our knowledge, the chemical, physical, and toxicological properties of this material have not been established.

Emergency Overview: Harmful by Ingestion. Irritant.**Potential Health Effects:****Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.**Eye Contact:** Causes eye irritation. Risk of damage to eyes.**Skin Contact:** May be harmful if absorbed through skin. Causes skin irritation.**Ingestion:** Harmful if swallowed.**First Aid Measures for hazardous ingredient:**

Hydrogen Peroxide:

Inhalation: Remove to fresh air. If breathing is difficult, get medical attention.**Ingestion: DO NOT INDUCE VOMITING.** If person is conscious, wash out mouth with water. Get medical attention.**Skin contact:** Wash skin with soap or mild detergent and water for at least 15 minutes. If irritation develops or persists, get medical attention.**Eye contact:** Immediately flush eyes water for at least 15 minutes. Get medical attention.**Accidental Release Measures:**

Wear appropriate personal protective equipment as indicated. Absorb liquid with an absorbent material. Transfer contaminated absorbent to a closed chemical waste container for disposal. Wash spill site after material has been picked up for disposal.

Handling and Storage:

Store at 4°C in tightly closed container. Avoid inhalation of vapor or mist. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling. Avoid prolonged or repeated exposure.

Exposure Controls/Personal**Ventilation System:** a system of local (fume hood) and general exhaust is recommended.**Skin Protection:** wear compatible chemical resistant gloves and protective clothing.**Eye protection:** wear chemical safety goggles. Maintain emergency eyewash and shower in work area.**Physical and Chemical Properties****Appearance:** colorless liquid**Odor:** data not available**pH:** data not available**Boiling Point:** data not available**Melting or Freezing Point:** data not available**Flash Point:** data not available**Volatile Organic Compounds:** data not available**Autoignition temp:** data not available**Solubility (water):** Soluble in water**Toxicological Information:****Acute toxicity:** data not available**Chronic exposure:** data not available**Potential Health Effects:****Inhalation:** May be harmful if inhaled. Causes respiratory tract irritation.**Skin:** May be harmful if absorbed through skin. Causes skin irritation.**Eyes:** Causes eye irritation.**Ingestion:** Harmful if swallowed.**Disposal Considerations:**

Dispose of in accordance with federal, state and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

Other Information:

This product is for research use only and is not intended for use in humans. To the best of our knowledge, this document is accurate. It is intended to serve as a guide for safe use of this product in a laboratory setting by experienced personnel. The burden of safe use of this material rests entirely with the user. The above information is believed to be accurate but is not necessarily all-inclusive and shall be used only as a guide. Tribioscience, Inc., shall not be held liable for any damage resulting from the handling of or from contact with the above product.