

WSP-1 *CAS 1352750-34-5*

 Catalog number: 21509
 Unit size: 1 mg

Component	Storage	Amount
WSP-1 *CAS 1352750-34-5*	Freeze (< -15 °C), Minimize light exposure	1 vial (1 mg)

OVERVIEW

Hydrogen sulfide (H₂S) is an important gaseous mediator, like nitric oxide, that has significant effects on the immunological, neurological, cardiovascular and pulmonary systems of mammals. WSP-1 is a reactive disulfide-containing, fluorescent probe designed to detect H₂S in biological samples and cells. Through a reaction-based fluorescent turn-on strategy, WSP-1 selectively and rapidly reacts with H₂S to generate benzodithiolone and a fluorophore with excitation and emission maxima of 465 and 515 nm, respectively.

KEY PARAMETERS
Fluorescence microscope

Excitation	FITC filter set
Emission	FITC filter set
Recommended plate	Black wall/clear bottom

PREPARATION OF STOCK SOLUTIONS

Unless otherwise noted, all unused stock solutions should be divided into single-use aliquots and stored at -20 °C after preparation. Avoid repeated freeze-thaw cycles.

WSP-1 stock solution

Add 356 µL of DMSO to prepare 5 mM WSP-1 stock solution. **Note:** The unused stock solution can be stored at -20 °C. Store in dark place and protect from light.

PREPARATION OF WORKING SOLUTION
WSP-1 working solution

Prepare 50-100 µM WSP-1 working solution in FBS-free DMEM. e.g. To prepare 10 mL of WSP-1 working solution at 100 µM working concentration, add 200 µL of WSP-1 stock solution into 10 mL of FBS-free DMEM and mix well.

SAMPLE EXPERIMENTAL PROTOCOL
Cell imaging experiments with H₂S treatment

1. Culture cells overnight.
2. Wash cells once with FBS-free DMEM.
3. Incubate cells with WSP-1 working solution at 37 °C for 30 minutes.
Note: Incubation time can be optimized if necessary.
4. Wash cells with 1X PBS.
5. Incubate cells with or without NaHS for 30 minutes in PBS buffer.
6. Wash cells twice with PBS.
7. Acquire image with fluorescence microscope using FITC filter.

Cell imaging experiments with H₂S donor

1. Culture cells overnight.

2. Wash cells once with FBS-free DMEM.
3. Incubate cells with or without the donor in FBS free medium.
4. Wash cells with FBS free medium.
5. Incubate cells with WSP-1 working solution at 37 °C for 30 minutes.
Note: Incubation time can be optimized if necessary.
6. Wash cells twice with PBS.
7. Acquire image with fluorescence microscope using FITC filter.

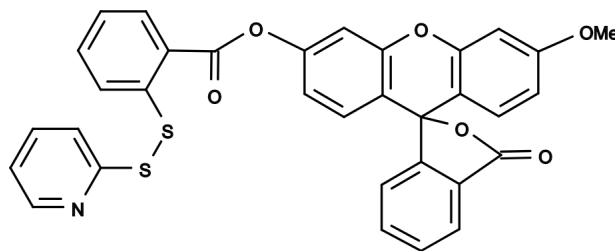
EXAMPLE DATA ANALYSIS AND FIGURES


Figure 1. Chemical structure for WSP-1 *CAS 1352750-34-5*

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