

# PRODUCT INFORMATION



## PHPS1

Item No. 18856

CAS Registry No.: 314291-83-3

Formal Name: 4-[2-[1,5-dihydro-3-(4-nitrophenyl)-5-oxo-1-phenyl-4H-pyrazol-4-ylidene]hydrazinyl]-benzenesulfonic acid

Synonyms: Phenylhydrazonopyrazolone sulfonate 1, Protein Tyrosine Phosphatase Inhibitor V, PTP Inhibitor V

MF: C<sub>21</sub>H<sub>15</sub>N<sub>5</sub>O<sub>6</sub>S

FW: 465.4

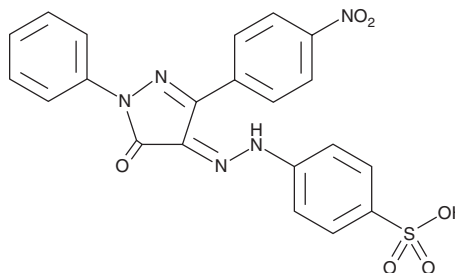
Purity: ≥98%

UV/Vis.: λ<sub>max</sub>: 244, 299, 411 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

PHPS1 is supplied as a crystalline solid. A stock solution may be made by dissolving the PHPS1 in the solvent of choice, which should be purged with an inert gas. PHPS1 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of PHPS1 in these solvents is approximately 5 mg/ml.

PHPS1 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PHPS1 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. PHPS1 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

PHPS1 is a cell-permeable, phosphotyrosine mimetic that inhibits the Src homology region 2 domain-containing phosphatase (SHP)-2 (IC<sub>50</sub> = 2.1 μM; K<sub>i</sub> = 0.73 μM).<sup>1</sup> It is selective for SHP-2, inhibiting ECPTP, PTP1B, SHP-1, and mycobacterium MptpA at relatively higher concentrations (IC<sub>50</sub>s = 5.4, 19, 30, and 39 μM, respectively).<sup>1</sup> PHPS1 has been shown to inhibit SHP-2-dependent cellular signaling and tumor cell colony formation.<sup>1</sup>

### Reference

1. Hellmuth, K., Grosskopf, S., Lum, C.T., *et al.* Specific inhibitors of the protein tyrosine phosphatase Shp2 identified by high-throughput docking. *Proc. Natl. Acad. Sci. USA* **105**(20), 7275-7280 (2008).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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