

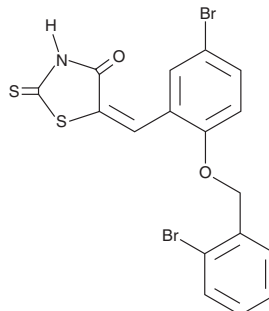
# PRODUCT INFORMATION



## PRL-3 Inhibitor

Item No. 18719

**CAS Registry No.:** 893449-38-2  
**Formal Name:** 5-[[5-bromo-2-[(2-bromophenyl)methoxy]phenyl]methylene]-2-thioxo-4-thiazolidinone  
**Synonyms:** BR-1, P0108, Phosphatase of Regenerating Liver 3 Inhibitor, PTP4A3 Inhibitor  
**MF:** C<sub>17</sub>H<sub>11</sub>Br<sub>2</sub>NO<sub>2</sub>S<sub>2</sub>  
**FW:** 485.2  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 273, 384 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

PRL-3 inhibitor is supplied as a crystalline solid. A stock solution may be made by dissolving the PRL-3 inhibitor in the solvent of choice, which should be purged with an inert gas. PRL-3 inhibitor is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of PRL-3 inhibitor in these solvents is approximately 16 mg/ml.

PRL-3 inhibitor is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PRL-3 inhibitor should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. PRL-3 inhibitor has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Phosphatase of regenerating liver 3 (PRL-3; also known as PTP4A3) plays critical roles in cell proliferation, motility, and invasion, and thus contributes to cancer metastasis. PRL-3 inhibitor is a cell-permeable benzylidene rhodamine that inhibits PRL-3 (IC<sub>50</sub> = 900 nM for human PRL-3 *in vitro*), with minimal activity against other phosphatases.<sup>1,2</sup> It reduces the invasion of mouse melanoma B16F10 cells in a cell-based assay.<sup>1</sup> PRL-3 inhibitor has been used to elucidate the actions of this enzyme, demonstrating that it dephosphorylates Tyr<sup>783</sup> on integrin β1 and modulates VEGF-mediated endothelial cell migration.<sup>3,4</sup> It dose-dependently inhibits growth and triggers apoptosis in cancer cell lines.<sup>5,6</sup>

### References

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2. Min, G., Lee, S.K., Kim, H.N., *et al. Bioorg. Med. Chem. Lett.* **23(13)**, 3769-3774 (2013).
3. Tian, W., Qu, L., Meng, L., *et al. BMC Biochem.* **13(22)**, (2012).
4. Zimmerman, M.W., McQueeney, K.E., Isenberg, J.S., *et al. J. Biol. Chem.* **289(9)**, 5904-5913 (2014).
5. Ooki, A., Yamashita, K., Kikuchi, S., *et al. BMC Cancer* **11(122)**, (2011).
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#### 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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