

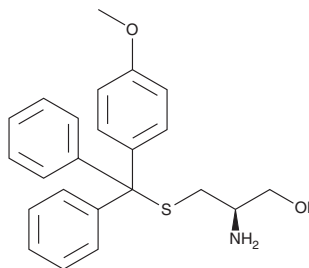
# PRODUCT INFORMATION



## Eg5-I

Item No. 16668

**CAS Registry No.:** 1338701-15-7  
**Formal Name:** (2R)-2-amino-3-[[[4-methoxyphenyl]diphenylmethyl]thio]-1-propanol  
**MF:** C<sub>23</sub>H<sub>25</sub>NO<sub>2</sub>S  
**FW:** 379.5  
**Purity:** ≥98%  
**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

Eg5-I is supplied as a crystalline solid. A stock solution may be made by dissolving the Eg5-I in the solvent of choice, which should be purged with an inert gas. Eg5-I is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of Eg5-I in these solvents is approximately 1, 25, and 5 mg/ml, respectively.

Eg5-I is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Eg5-I should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Eg5-I 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

The kinesin-like spindle protein Eg5, also known as KSP and Kif11, is a motor protein that is essential for establishing a bipolar spindle during mitosis.<sup>1</sup> Eg5-I is a potent inhibitor of Eg5, both *in vitro* and in cells (IC<sub>50</sub>s = 127 and 190 nM, respectively).<sup>2</sup> It is an analog of S-trityl-L-cysteine (STLC), but is more potent and has better solubility than STLC. Eg5-I blocks bipolar spindle formation and inhibits the growth of cancer cells, with an average GI<sub>50</sub> value of 360 nM against a broad panel of tumor cells (GI<sub>50</sub> range = 10 nM to 3 μM).<sup>2</sup> It ranges from 140- to 1200-fold more potent against cancer cells than monastrol (Item No. 15044), which also acts by inhibiting Eg5.<sup>1,2</sup>

### References

1. Good, J.A.D., Skoufias, D.A., and Kozielski, F. Elucidating the functionality of kinesins: An overview of small molecule inhibitors. *Semin. Cell Dev. Biol.* **22(9)**, 935-945 (2011).
2. Rodriguez, D., Ramesh, C., Henson, L.H., *et al.* Synthesis and characterization of tritylthioethanamine derivatives with potent KSP inhibitory activity. *Bioorg. Med. Chem.* **19(18)**, 5446-5453 (2011).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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