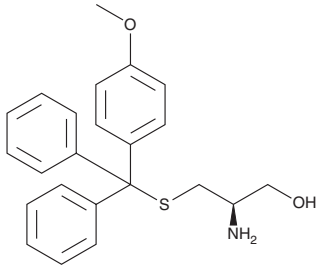
PRODUCT INFORMATION

Eg5-I

Item No. 16668

CAS Registry No.: 1338701-15-7
Formal Name: (2R)-2-amino-3-[[(4-methoxyphenyl) diphenylmethyl]thio]-1-propanol
MF: $C_{23}H_{25}NO_2S$
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.[1] Eg5-I is a potent inhibitor of Eg5, both *in vitro* and in cells (IC_{50}s = 127 and 190 nM, respectively).[2] 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_{50} value of 360 nM against a broad panel of tumor cells (GI_{50} range = 10 nM to 3 µM).[2] It ranges from 140- to 1200-fold more potent against cancer cells than monastrol (Item No. 15044), which also acts by inhibiting Eg5.[1,2]

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).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM