

# PRODUCT INFORMATION



**SB-590885**

Item No. 16643

**CAS Registry No.:** 405554-55-4

**Formal Name:** 5-[2-[4-[2-(dimethylamino)ethoxy]phenyl]-5-(4-pyridinyl)-1H-imidazol-4-yl]-2,3-dihydro-1H-inden-1-one oxime

**MF:** C<sub>27</sub>H<sub>27</sub>N<sub>5</sub>O<sub>2</sub>

**FW:** 453.5

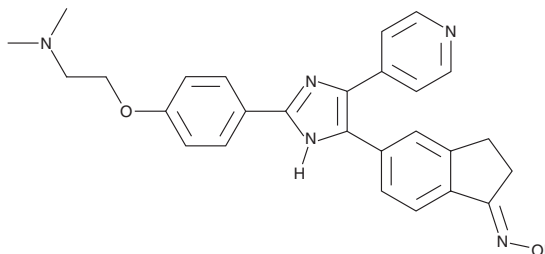
**Purity:** ≥98%

**UV/Vis.:** λ<sub>max</sub>: 307 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

SB-590885 is supplied as a crystalline solid. A stock solution may be made by dissolving the SB-590885 in the solvent of choice, which should be purged with an inert gas. SB-590885 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of SB-590885 in these solvents is approximately 0.5, 3, and 2 mg/ml, respectively.

SB-590885 is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

## Description

B-Raf is a MAP kinase kinase kinase, which functions downstream of Ras family GTPases to activate MEK1/2 and ERK1/2 signaling.<sup>1</sup> Mutations of B-Raf, particularly at Val<sup>600</sup>, are common in melanomas and melanocytic nevi.<sup>1</sup> SB-590885 is a potent inhibitor of B-Raf (K<sub>d</sub> = 0.3 nM).<sup>2</sup> It less effectively inhibits c-Raf (K<sub>i</sub> = 1.72 nM) and has little effect at 46 other kinases.<sup>2,3</sup> SB-590885 blocks activation of ERK1/2 and anchorage-independent cell proliferation of melanoma cells with either wild type or V600E B-Raf at nanomolar concentrations.<sup>3,4</sup> Melanoma cells expressing the B-Raf<sup>V600E</sup> mutation can drive invasion through alternative pathways in the presence of SB-590885, suggesting that combination therapy is needed to completely block cell invasion.<sup>4</sup> SB-590885 has also been used to study the role of B-Raf in cerebral ischemia.<sup>5</sup>

## References

1. Tronnier, M. and Mitteldorf, C. *Cancer Manag. Res.* **6**, 349-356 (2014).
2. Takle, A.K., Bamford, M.J.B., Davies, S., et al. *Bioorg. Med. Chem. Lett.* **18(15)**, 4373-4376 (2008).
3. King, A.J., Patrick, D.R., Batorsky, R.S., et al. *Cancer Res.* **66(23)**, 11100-11105 (2006).
4. Klein, R.M. and Higgins, P.J. *Mol. Cancer* **10**, 2-8 (2011).
5. Ahnstedt, H., Säveland, H., Nilsson, O., et al. *BMC Neurosci.* **12**, 1-9 (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.

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