

# PRODUCT INFORMATION



**MK-0812**

Item No. 21803

**CAS Registry No.:** 624733-88-6

**Formal Name:** 1,5-anhydro-2,3-dideoxy-3-[[[(1R,3S)-3-[[[7,8-dihydro-3-(trifluoromethyl)-1,6-naphthyridin-6(5H)-yl]carbonyl]-3-(1-methylethyl)cyclopentyl]amino]-4-O-methyl-D-erythro-pentitol

**MF:** C<sub>24</sub>H<sub>34</sub>F<sub>3</sub>N<sub>3</sub>O<sub>3</sub>

**FW:** 469.5

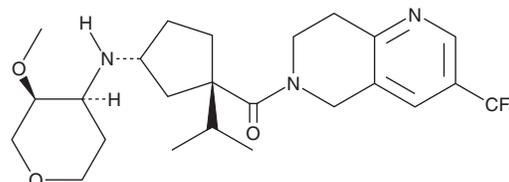
**Purity:** ≥98%

**UV/Vis.:** λ<sub>max</sub>: 267 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

MK-0812 is supplied as a crystalline solid. A stock solution may be made by dissolving the MK-0812 in the solvent of choice, which should be purged with an inert gas. MK-0812 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of MK-0812 in these solvents is approximately 10, 1, and 15 mg/ml, respectively.

MK-0812 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, MK-0812 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. MK-0812 has a solubility of approximately 0.04 mg/ml in a 1:20 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

## Description

MK-0812 is an antagonist of chemokine (C-C) motif receptor 2 (CCR2; IC<sub>50</sub> = 5 nM for the human receptor).<sup>1</sup> It inhibits mammosphere formation of BT-549 breast cancer cells, an effect that is enhanced by the β-catenin inhibitor PNU 74654 (Item No. 16349).<sup>2</sup> MK-0812 (0.03, 0.1, and 0.3 mg/kg) increases chemokine (C-C) motif ligand 2 (CCL2) levels and decreases CD11b<sup>+</sup> monocytes in mouse blood.<sup>3</sup>

## References

1. Abagyan, R., Christopoulos, A., de Esch, I.J.P., et al. *Chemokines. Chemokines and their receptors in drug discovery*. Springer International Publishing, Switzerland (2015).
2. Zhang, F., Li, P., Liu, S., et al. β-Catenin-CCL2 feedback loop mediates crosstalk between cancer cells and macrophages that regulates breast cancer stem cells. *Oncogene* **40(39)**, 5854-5865 (2021).
3. Min, S.-H., Wang, Y., Gonsiorek, W., et al. Pharmacological targeting reveals distinct roles for CXCR2/CXCR1 and CCR2 in a mouse model of arthritis. *Biochem. Biophys. Res. Commun.* **391(1)**, 1080-1086 (2010).

### 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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