

# PRODUCT INFORMATION



## Odanacatib

Item No. 21466

CAS Registry No.: 603139-19-1

Formal Name: (2S)-N-(1-cyanocyclopropyl)-4-fluoro-4-methyl-2-[[[(1S)-2,2,2-trifluoro-1-[4'-(methylsulfonyl)[1,1'-biphenyl]-4-yl]ethyl]amino]-pentanamide

Synonym: MK-0822

MF: C<sub>25</sub>H<sub>27</sub>F<sub>4</sub>N<sub>3</sub>O<sub>3</sub>S

FW: 525.6

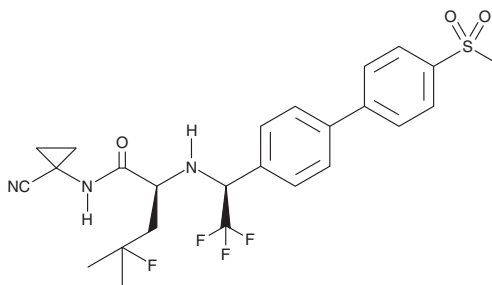
Purity: ≥98%

UV/Vis.: λ<sub>max</sub>: 265 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

Odanacatib is supplied as a crystalline solid. A stock solution may be made by dissolving the odanacatib in the solvent of choice. Odanacatib is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of odanacatib in these solvents is approximately 15 and 30 mg/ml, respectively.

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

### Description

Odanacatib is a potent, selective, and neutral inhibitor of cathepsin K (IC<sub>50</sub>s = 0.2 and 1 nM for human and rabbit enzymes, respectively), a protease involved in osteoclastic bone resorption.<sup>1</sup> It demonstrates high selectivity for cathepsin K over cathepsins B, L, and S. Formulations containing odanacatib reduce bone resorption, with lesser reductions in bone formation, resulting in increased bone mineral density.<sup>2,3</sup>

### References

1. Gauthier, J.Y., Chauret, N., Cromlish, W., *et al.* The discovery of odanacatib (MK-0822), a selective inhibitor of cathepsin K. *Bioor. Med. Chem. Lett.* **18**(3), 923-928 (2008).
2. Chapurlat, R.D. Odanacatib: A review of its potential in the management of osteoporosis in postmenopausal women. *Ther. Adv. Musculoskelet. Dis.* **7**(3), 103-109 (2015).
3. Rachner, T.D., Khosla, S., and Hofbauer, L.C. New horizons in osteoporosis. *Lancet.* **377**(9773), 1276-1298 (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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