Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Odanacatib

Catalog No: tcsc0277

Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
603139-19-1

Formula:
$C_{25}H_{27}F_4N_3O_3S$

Pathway:
Metabolic Enzyme/Protease

Target:
Cathepsin

Purity / Grade:
>98%

Solubility:
DMSO : ≥ 25 mg/mL (47.57 mM)

Alternative Names:
MK-0822

Observed Molecular Weight:
525.56

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Product Description

Odanacatib is a potent, selective, and neutral inhibitor of **cathepsin K** (human/rabbit) with **IC_{50}** of 0.2 nM/1 nM, and demonstrates high selectivity versus off-target cathepsin B, L, S.

IC50 & Target: IC50: 0.2 nM (Human Cathepsin K), 1 nM (Rabbit Cathepsin K)

In Vitro: Odanacatib is a weak inhibitor of antigen presentation, measured in a mouse B cell line (IC_{50}=1.5±0.4 μM), compared to the Cat S inhibitor LHVS (IC_{50}=0.001 μM) in the same assay. Odanacatib also shows weak inhibition of the processing of the MHC II invariant chain protein Iip10 in mouse splenocytes compared to LHVS (minimum inhibitory concentration 1-10 μM versus 0.01 μM, respectively)[1]. Odanacatib reduces resorption activity as measured by CTx release (IC_{50}=9.4 nM) or resorption area (IC_{50}=6.5 nM), but has no impact on OC activation. Odanacatib dose-dependently reduces CTx release with an IC_{50}=9.4±1.0 nM. Odanacatib treated OC accumulates labeled degraded bone matrix proteins in CatK containing vesicles[2].

In Vivo: Odanacatib (30 mg/kg, orally, once daily) persistently suppresses bone resorption markers and serum bone formation markers versus vehicle-treated OVX monkeys. Odanacatib displays compartment-specific effects on trabecular versus cortical bone formation, with treatment resulting in marked increases in periosteal bone formation and cortical thickness in ovariectomized monkeys whereas trabecular bone formation is reduced[3]. The bone volume/total volume (BV/TV) and bone mineral density (BMD) of the OVX + ODN-h group is significantly higher than that of the OVX + Veh group (p [4].