

Product Data Sheet

Product Name: OATD-01

Cat. No.: GC62127

Chemical Properties

Cas. No. 2088453-21-6

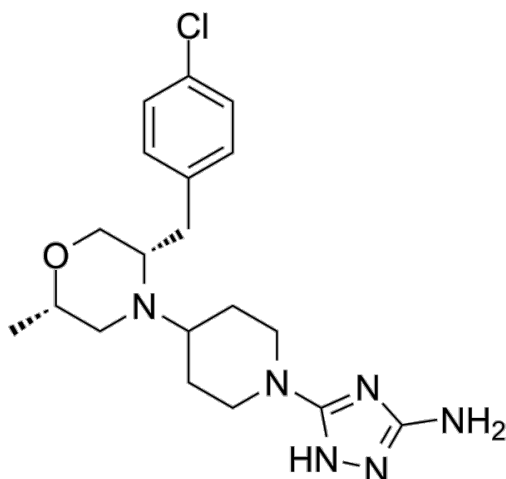
Formula $C_{19}H_{27}ClN_6O$ M.Wt 390.91

Solubility DMSO : 100 mg/mL (255.81 mM; Need ultrasonic) Storage Store at -20°C, protect from light, stored under nitrogen

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



Background

OATD-01 is a highly potent, first-in-class, orally active and selective chitinase inhibitor with low nanomolar activity toward CHIT1 (hCHIT1, IC₅₀=23 nM). OATD-01 shows excellent PK profile in multiple species and is selective against a panel of other off-targets. OATD-01 exhibits significant antifibrotic efficacy in vivo and can be used for pulmonary fibrosis (IPF) research[1].

OATD-01 exhibits high affinity toward h/mCHIT1 and h/mAMCase, and the inhibitory constants (K_i) for all four enzymes are 17.3 nM, 26.05 nM, 4.8 nM and 5.7 nM, respectively[1]. These K_i values

Caution: Product has not been fully validated for medical applications. For research use only.

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reveals good correlation with earlier established IC₅₀ data, the IC₅₀ values are 23 nM, 28 nM, 9 nM and 7.8 nM for hCHIT1, mCHIT1, hAMCase and mAMCase, respectively.[1]. Off-target in vitro effects of compound OATD-01 have been evaluated at 10 μ M in the Eurofins Panlabs panel of 98 in vitro binding and enzymatic assays, involving diverse molecular classes of proteins[1].

OATD-01 (oral gavage; 30 mg/kg, 100 mg/kg; once daily; 21 days) shows significant antifibrotic efficacy in an animal model of bleomycin-induced pulmonary fibrosis. It reduces the degree of lung fibrosis in a dose-dependent manner, ultimately achieving comparable therapeutic efficacy to reference treatment with Nintedanib in this animal model[1].

[1]. Robert Koralewski, et al. Discovery of OATD-01, a First-in-Class Chitinase Inhibitor as Potential New Therapeutics for Idiopathic Pulmonary Fibrosis. J Med Chem. 2020 Dec 24;63(24):15527-15540.

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