

Tubastatin A (Hydrochloride)

Catalog No: tcsc0498



Available Sizes

Size: 5mg

Size: 10mg

Size: 50mg

Size: 100mg

Size: 200mg

Size: 500mg

Size: 1g



Specifications

CAS No:

1310693-92-5

Formula:

$C_{20}H_{22}ClN_3O_2$

Pathway:

Autophagy;Epigenetics;Cell Cycle/DNA Damage

Target:

Autophagy;HDAC;HDAC

Purity / Grade:

>98%

Solubility:

DMSO : 10.8 mg/mL (29.04 mM; Need ultrasonic and warming)

Alternative Names:

Tubastatin A HCl; TSA HCl

Observed Molecular Weight:

371.86

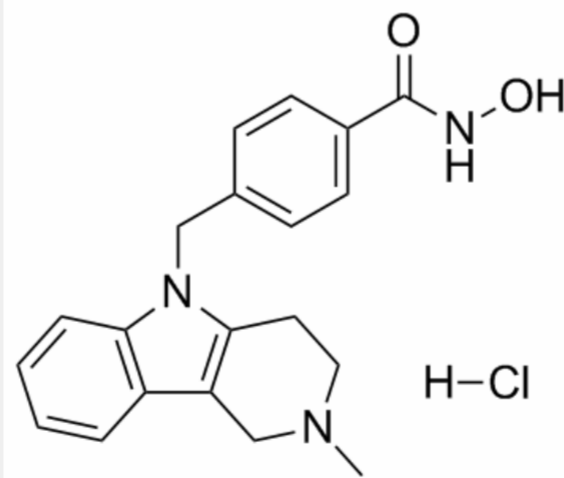
Product Description

Tubastatin A (Hydrochloride) is a potent and selective **HDAC6** inhibitor with **IC₅₀** of 15 nM in a cell-free assay, and is selective (1000-fold more) against all other isozymes except HDAC8 (57-fold more).

IC50 & Target: IC50: 15 nM (HDAC6)^[1]

In Vitro: Tubastatin A is substantially selective for all 11 HDAC isoforms and maintains over 1000-fold selectivity against all isoforms excluding HDAC8, where it has approximately 57-fold selectivity. In homocysteic acid (HCA) induced neurodegeneration assays, Tubastatin A displays dose-dependent protection against HCA-induced neuronal cell death starting at 5 μM with near complete protection at 10 μM^[1]. At 100 ng/mL Tubastatin A increases Foxp³⁺ T-regulatory cells (Tregs) suppression of T cell proliferation in vitro^[2]. Tubastatin A treatment in CC12 cells would lead to myotube formation impairment when alpha-tubulin is hyperacetylated early in the myogenic process; however, myotube elongation occurs when alpha-tubulin is hyperacetylated in myotubes^[3]. A recent study indicates that Tubastatin A treatment increases cell elasticity as revealed by atomic force microscopy (AFM) tests without exerting drastic changes to the actin microfilament or microtubule networks in mouse ovarian cancer cell lines, MOSE-E and MOSE-L^[4].

In Vivo: Daily treatment of Tubastatin A at 0.5 mg/kg inhibits HDAC6 to promote Tregs suppressive activity in mouse models of inflammation and autoimmunity, including multiple forms of experimental colitis and fully major histocompatibility complex (MHC)-incompatible cardiac allograft rejection^[2].



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