

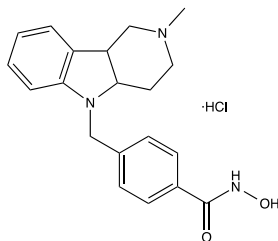
**Catalog # 10-4530**

**Tubastatin A**

CAS# 1310693-92-5

*N*-Hydroxy-4-[(2-methyl-3,4-dihydro-1*H*-pyrido[4,3-*b*]indol-5-yl)methyl]benzamide hydrochloride

Lot # FBM2202



Tubastatin A is a potent and highly selective inhibitor of HDAC6 (IC<sub>50</sub> = 15 nM, >1000-fold selectivity against other HDAC isoforms, approx. 60-fold versus HDAC8).<sup>1</sup> It displayed anti-inflammatory and anti-rheumatic effects in Freund's competitive adjuvant induced animal model of inflammation.<sup>2</sup> Tubastatin A inhibited TNF- $\alpha$  (IC<sub>50</sub> = 272 nM) and IL-6 (IC<sub>50</sub> = 712 nM) in LPS stimulated human THP-1 macrophages.<sup>2</sup> Tubastatin A has also been shown to have therapeutic potential for treatment of Alzheimers disease via altered amyloid- $\beta$  load and reduced tau hyperphosphorylation.<sup>3,4,5</sup>

- 1) Butler *et al.* (2010), *Rational design and simple chemistry yield a superior, neuroprotective HDAC6 inhibitor, tubastatin A*; J.Am.Chem.Soc. **132** 10842
- 2) Vishwakarma *et al.* (2013), *Tubastatin, a selective histone deacetylase 6 inhibitor shows anti-inflammatory and anti-rheumatic effects*; Int.Immunopharmacol, **16** 72
- 3) Noack and Richter-Landsberg (2014), *HDAC6 inhibition results in tau acetylation and modulates tau phosphorylation and degradation in oligodendrocytes*; Glia, **62** 535
- 4) Selenica *et al.* (2014), *Histone deacetylase 6 inhibition improves memory and reduces total tau levels in a mouse model of tau deposition*; Alzheimers Res.Ther. **6** 12
- 5) Zhang *et al.* (2014) *Tubastatin A/ACY-1215 improves cognition in Alzheimers disease transgenic mice*; J.Alzheimers Dis. **41** 1193

**PHYSICAL DATA**

Molecular Weight:	371.86
Molecular Formula:	C <sub>20</sub> H <sub>22</sub> N <sub>3</sub> O <sub>2</sub> ·HCl
Purity:	99% by HPLC
	NMR: (Conforms)
Solubility:	DMSO or water
Physical Description:	White solid
Storage and Stability:	Store as supplied at room -20°C for up to 2 years from the date of purchase. Solutions in DMSO or water may be stored at -20°C for up to 3 months.

**Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.**