NEUROMICS

Tolcapone Data Sheet

Catalog Number:	MC11026	**Product Type:**	Small Molecule
Bio-Activity:	COMT inhibitor; TTR aggregation inhibitor	**CAS #:**	134308-13-7
Research Categories:	Neuroscience	**Chemical Name:**	(3,4-Dihydroxy-5-nitrophenyl)(4-methylphenyl)methanone
Solubility:	Soluble in DMSO (up to 25 mg/ml) or in Ethanol (up to 25 mg/ml)	**Molecular Formula:**	C14H11NO5
Purity:	> 98%	**Molecular Weight:**	273.24
Format:	Powder	**Ship Temp:**	Ambient
Storage:	-20°C		

Application Notes

Description/Data:
Tolcapone has demonstrated to be a Catechol O-methyltransferase inhibitor (COMT), limiting brain and peripheral enzymes (1). It is a potent inhibitor of alpha-synuclein and beta-amyloid oligomerization and fibrillogenesis protecting against extracellular toxicity (2). Tolcapone interacts with transthyretin (TTR) with high affinity (21 to 58 nM) and prevents TTR aggregation in human plasma and prevents TTR-induced cytotoxicity *in vitro*. It also steadies TTR in mice and humans *in vivo* (3). Tolcapone inhibits O-methylation of exogenous polyphenols such as EGCG (4).

References:

1) Manisto et al. (1992), Different in vivo properties of three new inhibitors of catechol O-methyltransferase in the rat; *Br, J. Pharmacol.*, 105 569

2) Giovanni et al. (2010), Entacapone and tolcapone, two catechol O-methyltransferase inhibitors, block fibril formation of alpha-synuclein and beta-amyloid and protect against amyloid-induced toxicity; *J. Biol. Chem.*, 285 14941

3) Sant'Anna et al. (2016), Repositioning tolcapone as a potent inhibitor of transthyretin amyloidogenesis and associated cellular toxicity; *Nat. Commun.*, 7 10787

4) Forester and Lambert (2015), The catechol-O-methyltranseferase inhibitor, tolcapone, increases the bioavailability of unmethylated (-)-epigallocatechin-3-gallate in mice; *Funct. Foods*, 17 183

FOR RESEARCH USE ONLY

Neuromics Antibodies • 5325 West 74th Street, Suite 8 • Edina, MN 55439
phone 866-350-1500 • fax 612-677-3976 • e-mail: pshuster@neuromics.com