



Catalog Number:	MC11022	Product Type:	Small Molecule
Bio-Activity:	MAO-B inhibitor, Parkinson's therapeutic	CAS #:	133865-89-1
Research Categories:	Neuroscience	Chemical Name:	(S)-(+)-2-[[4-(3-Fluorobenzyloxy)benzyl]amino]propanamide
Solubility:	Soluble in DMSO (up to 50 mg/ml)	Molecular Formula:	C17H19F2N4O2
Purity:	> 98%	Molecular Weight:	302.3
Format:	Powder	Ship Temp:	Ambient
Storage:	-20°C		

Application Notes

Description/Data:

Safinamide is a selective and reversible inhibitor of monoamine oxidase B (MAO-B, IC₅₀=98 nM) with greater than 100-fold selectivity over MAO-A (1). It has demonstrated anticonvulsant activity (2) and protection against kainate-induced seizures and hippocampal neurodegeneration in rat models (3). Safinamide decreases overactive glutamatergic signaling via use-dependent sodium channel blockade (4). It has been considered a potential therapeutic for Parkinson's disease (5). It's already demonstrated to be effective as an add-on to dopamine agonist therapy in early Parkinson's (6).

References:

- 1) Strolin Benedetti et al. (1994), The anticonvulsant FCE 26743 is a selective and short-acting MAO-B inhibitor devoid of inducing properties towards cytochrome P450-dependent testosterone hydroxylation in mice and rats *J. Pharm. Pharmacol.*, 46 814
- 2) Fariello et al. (1998), Preclinical evaluation of PNU-151774E as a novel anticonvulsant; *J. Pharmacol. Exp. Ther.* 285 397
- 3) Maj et al. (1998), PNU-151774E protects against kainite-induced status epilepticus and hippocampal lesions in the rat; *Eur. J. Pharmacol.*, 59 27
- 4) Gardoni et al. (2018), Safinamide Modulates Striatal glutamatergic Signaling in a Rat Model of Levodopa-Induced Dyskinesia; *J. Pharmacol. Exp. Ther.*, 367 442

FOR RESEARCH USE ONLY

NEUROMICS' REAGENTS ARE FOR IN VITRO AND CERTAIN NON-HUMAN IN VIVO EXPERIMENTAL USE ONLY AND NOT INTENDED FOR USE IN ANY HUMAN CLINICAL INVESTIGATION, DIAGNOSIS, PROGNOSIS, OR TREATMENT. THE ABOVE ANALYSES ARE MERELY TYPICAL GUIDES. THEY ARE NOT TO BE CONSTRUED AS BEING SPECIFICATIONS. ALL OF THE ABOVE INFORMATION IS, TO THE BEST OF OUR KNOWLEDGE, TRUE AND ACCURATE. HOWEVER, SINCE THE CONDITIONS OF USE ARE BEYOND OUR CONTROL, ALL RECOMMENDATIONS OR SUGGESTIONS ARE MADE WITHOUT GUARANTEE, EXPRESS OR IMPLIED, ON OUR PART. WE DISCLAIM ALL LIABILITY IN CONNECTION WITH THE USE OF THE INFORMATION CONTAINED HEREIN OR OTHERWISE, AND ALL SUCH RISKS ARE ASSUMED BY THE USER. WE FURTHER EXPRESSLY DISCLAIM ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.-V2/08/2012

5) Caccia et al. (2006), Safinamide: from molecular targets to a new anti-Parkinson drug; *Neurology*, 67(7 Suppl. 2) S18

6) Schapira et al. (2013), Long-term efficacy and safety of safinamide as add-on therapy in early Parkinson's disease; *Eur. J. Neurol.*, 20 271

FOR RESEARCH USE ONLY

NEUROMICS' REAGENTS ARE FOR IN VITRO AND CERTAIN NON-HUMAN IN VIVO EXPERIMENTAL USE ONLY AND NOT INTENDED FOR USE IN ANY HUMAN CLINICAL INVESTIGATION, DIAGNOSIS, PROGNOSIS, OR TREATMENT. THE ABOVE ANALYSES ARE MERELY TYPICAL GUIDES. THEY ARE NOT TO BE CONSTRUED AS BEING SPECIFICATIONS. ALL OF THE ABOVE INFORMATION IS, TO THE BEST OF OUR KNOWLEDGE, TRUE AND ACCURATE. HOWEVER, SINCE THE CONDITIONS OF USE ARE BEYOND OUR CONTROL, ALL RECOMMENDATIONS OR SUGGESTIONS ARE MADE WITHOUT GUARANTEE, EXPRESS OR IMPLIED, ON OUR PART. WE DISCLAIM ALL LIABILITY IN CONNECTION WITH THE USE OF THE INFORMATION CONTAINED HEREIN OR OTHERWISE, AND ALL SUCH RISKS ARE ASSUMED BY THE USER. WE FURTHER EXPRESSLY DISCLAIM ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.-V2/08/2012

www.neuromics.com

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