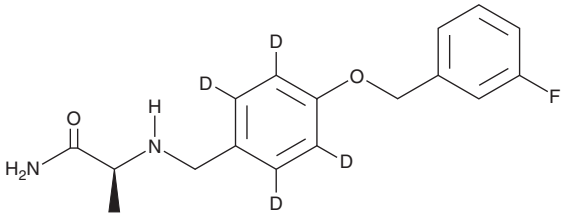
PRODUCT INFORMATION

Safinamide-d_4

Item No. 28490

CAS Registry No.: 2748522-33-8
Formal Name: 2S-[[[4-[(3-fluorophenyl)methoxy]phenyl-2,3,5,6-d_4]methyl]amino]-propanamide
MF: $C_{17}H_{15}D_4FN_2O_2$
FW: 306.4
Chemical Purity: ≥98% (Safinamide)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_4); ≤1% d_0
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Safinamide-d_4 is intended for use as an internal standard for the quantification of safinamide (Item No. 21546) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Safinamide-d_4 is supplied as a solid. A stock solution may be made by dissolving the safinamide-d_4 in the solvent of choice, which should be purged with an inert gas. Safinamide-d_4 is soluble in DMSO.

Description

Safinamide is an inhibitor of monoamine oxidase B (MAO-B; IC_{50} = ~0.1 µM).[1] It is selective for MAO-B over MAO-A (IC_{50} = >10 µM). It also inhibits radioligand binding to sodium channel binding site 2, sigma-1, and sigma-2 receptors in rat brain membranes (IC_{50}s = 8.2, 0.019, and 1.59 µM, respectively).[2] Safinamide inhibits high voltage-activated calcium currents and depolarization-induced tetrodotoxin-sensitive fast sodium currents in rat hippocampal neurons in a concentration-dependent manner. It inhibits veratrine-induced glutamate release in rat hippocampal slices (IC_{50} = 56 µM). Safinamide inhibits maximal electroshock-induced tonic extension seizures in mice and rats (ED_{50}s = 8 and 11.8 mg/kg, p.o.) as well as maximal seizures induced by bicuculline (Item No. 11727), picrotoxin (Item No. 20771), 3-mercaptopropionic acid, and strychnine in mice (ED_{50}s = 26.9, 60.6, 21.5, and 104.1 mg/kg, p.o., respectively).[3] Formulations containing safinamide have been used as adjunctive treatments to levodopa and carbidopa in the treatment of "off" episodes associated with Parkinson's disease.

References

1. Strolin Benedetti, M.S., Marrari, P., Colombo, M., *et al.* 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(10),** 814-819 (1994).
2. Salvati, P., Maj, R., Caccia, C., *et al.* Biochemical and electrophysiological studies on the mechanism of action of PNU-151774E, a novel antiepileptic compound. *J. Pharmacol. Exp. Ther.* **288(3),** 1151-1159 (1999).
3. Fariello, R.G., McArthur, R.A., Bonsignori, A., *et al.* Preclinical evaluation of PNU-151774E as a novel anticonvulsant. *J. Pharmacol. Exp. Ther.* **285(2),** 397-403 (1998).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM