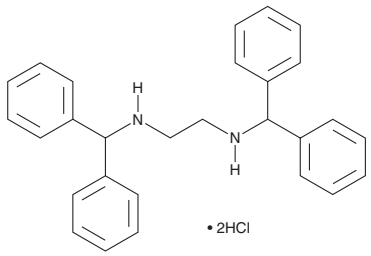
PRODUCT INFORMATION

AMN082

Item No. 28779

CAS Registry No.:	97075-46-2
Formal Name:	N,N′-*bis*(diphenylmethyl)-1,2-ethanediamine, dihydrochloride
MF:	$C_{28}H_{28}N_2 \bullet 2HCl$
FW:	465.5
Purity:	≥98%
Supplied as:	A crystalline 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

AMN082 is supplied as a crystalline solid. A stock solution may be made by dissolving the AMN082 in the solvent of choice, which should be purged with an inert gas. AMN082 is soluble in organic solvents such as ethanol and DMSO. The solubility of AMN082 in these solvents is approximately 1 and 100 mM, respectively. It is also soluble in water. The solubility of AMN082 in water is approximately 5 mM. We do not recommend storing the aqueous solution for more than one day.

Description

AMN082 is an orally bioavailable allosteric agonist of metabotropic glutamate receptor 7 (mGluR7).[1] It inhibits cAMP accumulation induced by forskolin in CHO cells expressing human mGluR7b (EC_{50} = 64 nM). AMN082 (10 µM) is selective for mGluR7a and mGluR7b over mGluR1b, mGluR4, and mGluR8a with 140, 90, 15, 18, and 20% activation, respectively, as well as over mGluR2, mGluR3, mGluR5a, mGluR6, GluR3, and NMDA receptors containing NR1a, NR2A, or NR2B subunits. AMN082 also binds to the norepinephrine transporter (NET) and α_1-adrenergic receptor (α_1-AR).[2] It increases the proliferation of neural progenitor cells (NPCs) and induces their differentiation into neurons when used at a concentration of 1 µM.[3] AMN082 (2.5 mg/kg) inhibits apomorphine-induced circling in a rat model of Parkinson's disease induced by 6-hydroxy dopamine (6-OHDA; Item No. 25330).[4]

References

1. Mitsukawa, K., Yamamoto, R., Ofner, S., *et al.* A selective metabotropic glutamate receptor 7 agonist: Activation of receptor signaling via an allosteric site modulates stress parameters *in vivo*. *Proc. Natl. Acad. Sci. U.S.A.* **102(51),** 18712-18717 (2005).
2. Sukoff Rizzo, S.J., Leonard, S.K., Gilbert, A., *et al.* The metabotropic glutamate receptor 7 allosteric modulator AMN082: A monoaminergic agent in disguise? *J. Pharmacol. Exp. Ther.* **338(1),** 345-352 (2011).
3. Tian, Y., Liu, Y., Chen, X., *et al.* AMN082 promotes the proliferation and differentiation of neural progenitor cells with influence on phosphorylation of MAPK signaling pathways. *Neurochem. Int.* **57(1),** 8-15 (2010).
4. Greco, B., Lopez, S., van der Putten, H., *et al.* Metabotropic glutamate 7 receptor subtype modulates motor symptoms in rodent models of Parkinson's disease. *J. Pharmacol. Exp. Ther.* **332(3),** 1064-1071 (2010).

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