Product Data Sheet

Product Name: AMN082 free base
Cat. No.: GC63922

Chemical Properties

Cas. No.	83027-13-8		
Formula	C28H28N2	M.Wt	392.54
Solubility	DMSO : 12.5 mg/mL (31.84 mM; ultrasonic and warming and heat to 60°C)	Storage	4°C, protect from light
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	AMN082 free base		

Background

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 .[4]

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 vivoProc. Natl. Acad. Sci. USA102(51)18712-18717(2005) 2.Sukoff Rizzo, S.J., Leonard, S.K., Gilbert, A., et al.The metabotropic glutamate receptor 7 allosteric

Caution: Product has not been fully validated for medical applications. For research use only.
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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 pathwaysNeurochem. 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 diseaseJ. Pharmacol. Exp. Ther.332(3)1064-1071(2010)

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