

Product data sheet



MedKoo Cat#: 532312 Name: NCGC 84 CAS: 1345964-89-7 Chemical Formula: C ₂₉ H ₂₆ BrN ₂ PS Exact Mass: 544.0738 Molecular Weight: 545.4788	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years. In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:

NCGC 84, also known as ML-154, is a competitive, selective, and brain penetrant NPS receptor antagonist. NCGC 84 blocks alcohol-induced ERK-phosphorylation in the central amygdala and decreases operant alcohol self-administration in rats.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMSO	54.55	100.0
Ethanol	27.27	50.0

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.83 mL	9.17 mL	18.33 mL
5 mM	0.37 mL	1.83 mL	3.67 mL
10 mM	0.18 mL	0.92 mL	1.83 mL
50 mM	0.04 mL	0.18 mL	0.37 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

Thorsell A, Tapocik JD, Liu K, Zook M, Bell L, Flanigan M, Patnaik S, Marugan J, Damadzic R, Dehdashti SJ, Schwandt ML, Southall N, Austin CP, Eskay R, Ciccocioppo R, Zheng W, Heilig M. A novel brain penetrant NPS receptor antagonist, NCGC00185684, blocks alcohol-induced ERK-phosphorylation in the central amygdala and decreases operant alcohol self-administration in rats. *J Neurosci.* 2013 Jun 12;33(24):10132-42. doi: 10.1523/JNEUROSCI.4742-12.2013. PMID: 23761908; PMCID: PMC3682378.

In vivo study

Thorsell A, Tapocik JD, Liu K, Zook M, Bell L, Flanigan M, Patnaik S, Marugan J, Damadzic R, Dehdashti SJ, Schwandt ML, Southall N, Austin CP, Eskay R, Ciccocioppo R, Zheng W, Heilig M. A novel brain penetrant NPS receptor antagonist, NCGC00185684, blocks alcohol-induced ERK-phosphorylation in the central amygdala and decreases operant alcohol self-administration in rats. *J Neurosci.* 2013 Jun 12;33(24):10132-42. doi: 10.1523/JNEUROSCI.4742-12.2013. PMID: 23761908; PMCID: PMC3682378.

7. Bioactivity

Biological target:

ML 154 is a potent neuropeptide S receptor (NPSR) antagonist (pA₂ = 9.98).

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In vitro activity

NCGC84 inhibited NPS-induced ERK phosphorylation in a concentration-dependent manner, and the resulting IC₅₀ value, 9.3 nM, is 2.3- and 3.9-fold more potent than the cAMP and intracellular calcium response, respectively (Fig. 5A). The inhibition of NPS-induced ERK phosphorylation by NCGC84 was confirmed by Western blot analysis (Fig. 5B).

Reference: J Neurosci. 2013 Jun 12;33(24):10132-42. <https://pubmed.ncbi.nlm.nih.gov/23761908/>

In vivo activity

In vivo, systemic NCGC00185684 blocks alcohol-induced ERK-phosphorylation in the rat central amygdala, a region involved in regulation of alcohol intake. NCGC00185684 also decreases operant alcohol self-administration, and lowers motivation for alcohol reward as measured using progressive ratio responding.

Reference: J Neurosci. 2013 Jun 12;33(24):10132-42. <https://pubmed.ncbi.nlm.nih.gov/23761908/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.