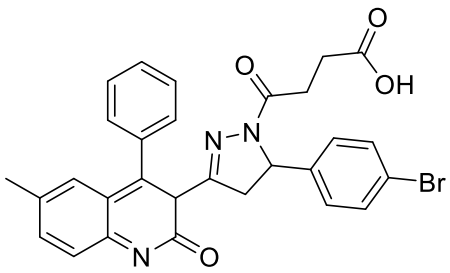
Product data sheet

MedKoo Cat#: 531764 Name: DQP-1105 CAS: 380560-89-4 Chemical Formula: $C_{29}H_{24}BrN_3O_4$ Exact Mass: 557.095 Molecular Weight: 558.432	
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:
DQP-1105 is a negative allosteric modulator of the GluN2C/D NMDA receptor inhibiting receptor function more potently when glutamate is present .

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	33.42	59.85

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.79 mL	8.95 mL	17.91 mL
5 mM	0.36 mL	1.79 mL	3.58 mL
10 mM	0.18 mL	0.90 mL	1.79 mL
50 mM	0.04 mL	0.18 mL	0.36 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

1. Wu YN, Johnson SW. Memantine selectively blocks extrasynaptic NMDA receptors in rat substantia nigra dopamine neurons. Brain Res. 2015 Apr 7;1603:1-7. doi: 10.1016/j.brainres.2015.01.041. Epub 2015 Feb 2. PMID: 25656790.
2. Acker TM, Yuan H, Hansen KB, Vance KM, Ogden KK, Jensen HS, Burger PB, Mullasseril P, Snyder JP, Liotta DC, Traynelis SF. Mechanism for noncompetitive inhibition by novel GluN2C/D N-methyl-D-aspartate receptor subunit-selective modulators. Mol Pharmacol. 2011 Nov;80(5):782-95. doi: 10.1124/mol.111.073239. Epub 2011 Aug 1. PMID: 21807990; PMCID: PMC3198917.

In vivo study

1. Swanger SA, Vance KM, Pare JF, Sotty F, Fog K, Smith Y, Traynelis SF. NMDA Receptors Containing the GluN2D Subunit Control Neuronal Function in the Subthalamic Nucleus. J Neurosci. 2015 Dec 2;35(48):15971-83. doi: 10.1523/JNEUROSCI.1702-15.2015. PMID: 26631477; PMCID: PMC4666920.

7. Bioactivity
Biological target:

DQP-1105 is a potent noncompetitive NMDA receptor antagonist.

In vitro activity

Product data sheet

DQP-1105 inhibited GluN2C- and GluN2D-containing receptors with IC(50) values that were at least 50-fold lower than those for recombinant GluN2A-, GluN2B-, GluA1-, or GluK2-containing receptors. DQP-1105 inhibited single-channel currents in excised outside-out patches without significantly changing mean open time or single-channel conductance, suggesting that DQP inhibits a pregating step without changing the stability of the open pore conformation and thus channel closing rate.

Reference: Mol Pharmacol. 2011 Nov;80(5):782-95. https://pubmed.ncbi.nlm.nih.gov/21807990/

In vivo activity

In vivo recordings from the STN of anesthetized adult rats demonstrated that the spike firing rate was increased by the GluN2C/D potentiator CIQ and decreased by the GluN2C/D antagonist DQP-1105, suggesting that NMDA receptor activity can influence STN output.

Reference: J Neurosci. 2015 Dec 2;35(48):15971-83. https://pubmed.ncbi.nlm.nih.gov/26631477/

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.