Product data sheet

MedKoo

MedKoo Cat#: 571367	
Name: RG7713	
CAS#: 920022-47-5	
Chemical Formula: $C_{25}H_{28}ClN_3O_2$	
Exact Mass: 437.1870	
Molecular Weight: 437.97	

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:

RG7713, also known as RO5028442, is a vasopressin receptor 1A (V1a) antagonist. RG7713 increases biological motion orienting preference. RG7713 works within the vasopressin system, which is implicated in social cognition and social signaling deficits of ASD.

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
Chloroform	10	22.83
DMSO	20	45.67

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.28 mL	11.42 mL	22.83 mL
5 mM	0.46 mL	2.28 mL	4.57 mL
10 mM	0.23 mL	1.14 mL	2.28 mL
50 mM	0.05 mL	0.23 mL	0.46 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

To be determined

In vivo study

1. Umbricht D, Del Valle Rubido M, Hollander E, McCracken JT, Shic F, Scahill L, Noeldeke J, Boak L, Khwaja O, Squassante L, Grundschober C, Kletzl H, Fontoura P. A Single Dose, Randomized, Controlled Proof-Of-Mechanism Study of a Novel Vasopressin 1a Receptor Antagonist (RG7713) in High-Functioning Adults with Autism Spectrum Disorder. Neuropsychopharmacology. 2017 Aug;42(9):1914-1923. doi: 10.1038/npp.2016.232. Epub 2016 Oct 6. Erratum in: Neuropsychopharmacology. 2017 Aug;42(9):1924. PMID: 27711048; PMCID: PMC5520775.
2. Ratni H, Rogers-Evans M, Bissantz C, Grundschober C, Moreau JL, Schuler F, Fischer H, Alvarez Sanchez R, Schnider P. Discovery of highly selective brain-penetrant vasopressin 1a antagonists for the potential treatment of autism via a chemogenomic and scaffold hopping approach. J Med Chem. 2015 Mar 12;58(5):2275-89. doi: 10.1021/jm501745f. Epub 2015 Feb 18. PMID: 25654260.

7. Bioactivity

Biological target:

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RG7713 is a brain-penetrant antagonist of vasopressin V1a receptors (Kis = 1 and 39 nM for the human and mouse receptors, respectively). It is more than 30,000-fold selective for V1 over V2 receptors, as well as over a panel of 120 receptors, ion channels, and enzymes at 3 μM.

In vitro activity

To be determined

In vivo activity

In a study of 19 high-functioning adult male subjects with DSM-IV Autistic Disorder, eye-tracking showed an increase in biological motion orienting preference with RG7713 (ES=0.8, p=0.047) and a non-significant improvement in the composite score (ES=0.2, p=0.29). RG7713 reduced ability to detect lust (ES=-0.8, p=0.03) and fear (ES=-0.7, p=0.07) in affective speech recognition.

Reference: Neuropsychopharmacology. 2017 Aug;42(9):1914-1923. https://pubmed.ncbi.nlm.nih.gov/28701745/

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.