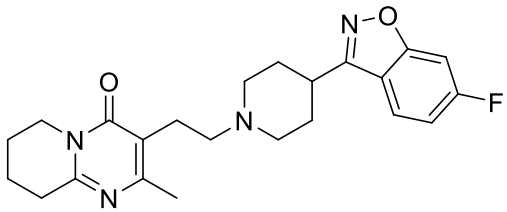


Product data sheet



MedKoo Cat#: 318669 Name: Risperidone CAS#: 106266-06-2 (free base) Chemical Formula: C ₂₃ H ₂₇ FN ₄ O ₂ Exact Mass: 410.2118 Molecular Weight: 410.4845		
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:

Risperidone is an antipsychotic medication. It is mainly used to treat schizophrenia, bipolar disorder, and irritability in people with autism. It is taken either by mouth or by injection into a muscle.

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
DMF	0.1	0.24
DMF:PBS (pH 7.2) (1:1)	0.5	1.22
DMSO	4.78	11.63
Ethanol	2.8	6.82

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.44 mL	12.18 mL	24.36 mL
5 mM	0.49 mL	2.44 mL	4.87 mL
10 mM	0.24 mL	1.22 mL	2.44 mL
50 mM	0.05 mL	0.24 mL	0.49 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. Zhang S, He W, Li A, Zhao C, Chen Y, Xu C, Zhang Q, Zheng D, Chen M, Miao H, Huang Y. Involvement of the TNF- α /SATB2 axis in the induced apoptosis and inhibited autophagy of osteoblasts by the antipsychotic Risperidone. Mol Med. 2022 May 3;28(1):46. doi: 10.1186/s10020-022-00466-9. PMID: 35505281; PMCID: PMC9066868.
2. Canfrán-Duque A, Pastor Ó, García-Seisdedos D, Molina YL, Babiy B, Lerma M, Sánchez-Castellano C, Martínez-Botas J, Gómez-Coronado D, Lasunción MA, Cruz-Jentoft AJ, Busto R. The Antipsychotic Risperidone Alters Dihydroceramide and Ceramide Composition and Plasma Membrane Function in Leukocytes In Vitro and In Vivo. Int J Mol Sci. 2021 Apr 10;22(8):3919. doi: 10.3390/ijms22083919. PMID: 33920193; PMCID: PMC8069118.

In vivo study

1. Rami FZ, Nguyen TB, Oh YE, Karamikheirabad M, Le TH, Chung YC. Risperidone Induced DNA Methylation Changes in Dopamine Receptor and Stathmin Genes in Mice Exposed to Social Defeat Stress. Clin Psychopharmacol Neurosci. 2022 May 31;20(2):373-388. doi: 10.9758/cpn.2022.20.2.373. PMID: 35466108; PMCID: PMC9048015.

Product data sheet



2. Lee TK, Lee JC, Tae HJ, Kim HI, Shin MC, Ahn JH, Park JH, Kim DW, Hong S, Choi SY, Cho JH, Won MH. Therapeutic Effects of Risperidone against Spinal Cord Injury in a Rat Model of Asphyxial Cardiac Arrest: A Focus on Body Temperature, Paraplegia, Motor Neuron Damage, and Neuroinflammation. Vet Sci. 2021 Oct 13;8(10):230. doi: 10.3390/vetsci8100230. PMID: 34679060; PMCID: PMC8537088.

7. Bioactivity

Biological target:

Risperidone is a serotonin 5-HT₂ receptor blocker, P-Glycoprotein inhibitor and potent dopamine D₂ receptor antagonist, with K_is of 4.8, 5.9 nM for 5-HT_{2A} and dopamine D₂ receptor, respectively.

In vitro activity

In addition, individual treatment with Risperidone brought about promotion of OPG mRNA and protein expression and inhibition of collagen I and RANKL mRNA and protein expression levels, the effect of which was abolished by additional TNF- α silencing. Meanwhile, additional SATB2 silencing also induced the promotion of OPG expression and inhibition of collagen I and RANKL expression levels in the Risperidone-treated TNF- α -deficient MC3T3-E1 cells (Fig. 5A, B, Additional file 1: Fig. S1A).

Reference: Mol Med. 2022 May 3;28(1):46. <https://pubmed.ncbi.nlm.nih.gov/35505281/>

In vivo activity

In contrast, in risperidone-treated rats, the immunoreactivity of the pro-inflammatory cytokines was significantly decreased, and the anti-inflammatory cytokines were enhanced compared to vehicle-treated rats. In brief, risperidone treatment after ACA/CPR (asphyxia CA and cardiopulmonary resuscitation) in rats significantly improved the survival rate and attenuated paralysis, the damage/death (loss) of motor neurons, and inflammation in the lumbar anterior horn. Thus, risperidone might be a therapeutic agent for paraplegia by attenuation of the damage/death (loss) of spinal motor neurons and neuroinflammation after ACA/CPR.

Reference: Vet Sci. 2021 Oct 13;8(10):230. <https://pubmed.ncbi.nlm.nih.gov/34679060/>

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.