

Product data sheet



MedKoo Cat#: 318297 Name: Nadolol CAS: 42200-33-9 Chemical Formula: C ₁₇ H ₂₇ NO ₄ Exact Mass: 309.194 Molecular Weight: 309.4006	
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:

Nadolol is a non-selective beta blocker used in the treatment of high blood pressure and chest pain. Additionally, it is often prescribed in the treatment of atrial fibrillation, migraine headaches, and complications of cirrhosis.

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	55.5	179.38

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.23 mL	16.16 mL	32.32 mL
5 mM	0.65 mL	3.23 mL	6.46 mL
10 mM	0.32 mL	1.62 mL	3.23 mL
50 mM	0.07 mL	0.32 mL	0.65 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. Peng H, Bond RA, Knoll BJ. The effects of acute and chronic nadolol treatment on β 2AR signaling in HEK293 cells. *Naunyn Schmiedebergs Arch Pharmacol.* 2011 Feb;383(2):209-16. doi: 10.1007/s00210-010-0591-9. Epub 2011 Jan 12. PMID: 21225244.

In vivo study

1. Mizuno K, Kurokawa K, Shibasaki M, Ohkuma S. β ₁-adrenergic receptor up-regulation induced by nadolol is mediated via signal transduction pathway coupled to α ₁-adrenergic receptors. *Brain Res.* 2011 Sep 26;1414:10-21. doi: 10.1016/j.brainres.2011.07.057. Epub 2011 Aug 2. PMID: 21871614.

7. Bioactivity

Biological target:

Nadolol (SQ-11725) is a non-selective and orally active β -adrenergic receptors blocker.

In vitro activity

This study examined the effects of nadolol on β (2)AR levels and signaling components downstream of the β (2)AR using a line of HEK293 cells expressing human β (2)ARs. Chronic treatment with NAD (nadolol) increased β (2)AR protein levels and decreased receptor degradation, consistent with receptor stabilization by the inverse agonist.

Product data sheet



Reference: Naunyn Schmiedebergs Arch Pharmacol. 2011 Feb;383(2):209-16. <https://pubmed.ncbi.nlm.nih.gov/21225244/>

In vivo activity

The present study attempted to clarify mechanisms of β -AR up-regulation using mouse cerebral cortical neurons continuously exposed to nadolol (10 nM), a non-selective β -AR antagonist, for 24 h. Nadolol dose-dependently induced both subtypes of β -ARs, β_1 - and β_2 -ARs, which were not suppressed by protein A kinase inhibition with KT5720.

Reference: Brain Res. 2011 Sep 26;1414:10-21. <https://pubmed.ncbi.nlm.nih.gov/21871614/>

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.