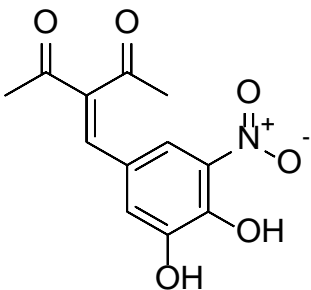


Product data sheet



MedKoo Cat#: 328037 Name: Nitecapone CAS: 116313-94-1 Chemical Formula: C ₁₂ H ₁₁ NO ₆ Exact Mass: 265.0586 Molecular Weight: 265.221		
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:

Nitecapone, also known as OR-462, is a catechol-O-methyltransferase inhibitor potentially for the treatment of peptic ulcer. Nitecapone reduces development and symptoms of neuropathic pain after spinal nerve ligation in rats. Nitecapone reduces cardiac neutrophil accumulation in clinical open heart surgery. Nitecapone inhibits myeloperoxidase in vitro and enhances functional performance after 8 h of ischemia in experimental heart transplantation.

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	30.0	113.11
DMSO	40.0	150.82
DMSO:PBS (pH 7.2) (1:1)	0.5	1.89
Ethanol	5.0	18.85

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.77 mL	18.85 mL	37.70 mL
5 mM	0.75 mL	3.77 mL	7.54 mL
10 mM	0.38 mL	1.89 mL	3.77 mL
50 mM	0.08 mL	0.38 mL	0.75 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. Vento AE, Rämö OJ, Nemlander AT, Ahotupa M, Nissinen E, Holopainen A, Mattila SP. Nitecapone inhibits myeloperoxidase in vitro and enhances functional performance after 8 h of ischemia in experimental heart transplantation. Res Exp Med (Berl). 1999 Apr;198(6):299-306. doi: 10.1007/s004330050113. PMID: 10369086.
2. Pentikäinen MO, Lindstedt KA, Kovanen PT. Inhibition of the oxidative modification of LDL by nitecapone. Arterioscler Thromb Vasc Biol. 1995 Jun;15(6):740-7. doi: 10.1161/01.atv.15.6.740. PMID: 7773727.

In vivo study

1. Kambur O, Männistö PT, Pusa AM, Käenmäki M, Kalso EA, Kontinen VK. Nitecapone reduces development and symptoms of neuropathic pain after spinal nerve ligation in rats. Eur J Pain. 2011 Aug;15(7):732-40. doi: 10.1016/j.ejpain.2010.12.001. Epub 2011 Jan 8. PMID: 21216640.

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2. Singh A, Kulkarni SK. Nitecapone and selegiline as effective adjuncts to L-DOPA in reserpine-induced catatonia in mice. *Methods Find Exp Clin Pharmacol*. 2002 Jan-Feb;24(1):23-9. doi: 10.1358/mf.2002.24.1.677124. PMID: 11980384.

7. Bioactivity

Biological target:

Nitecapone (OR-462) is an orally active and short-acting catechol-O-methyltransferase (COMT) inhibitor.

In vitro activity

The present study was executed to evaluate the effect of NC (nitecapone) on preservation of grafts in heart transplantation and the role of NC in the inhibition of granulocyte infiltration. In vitro studies demonstrated that NC inhibits 50% of purified MPO activity at a concentration of 10 microM.

Reference: *Res Exp Med (Berl)*. 1999 Apr;198(6):299-306. <https://pubmed.ncbi.nlm.nih.gov/10369086/>

In vivo activity

Both nitecapone treatments significantly reduced mechanical allodynia and withdrawal thresholds were 80-95% higher compared with the control group. In the acetone test, both nitecapone groups also showed less signs of cold allodynia than the control groups. In nitecapone-naïve rats a single dose of nitecapone also reduced mechanical allodynia on the 14th day after the surgery.

Reference: *Eur J Pain*. 2011 Aug;15(7):732-40. <https://pubmed.ncbi.nlm.nih.gov/21216640/>

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.