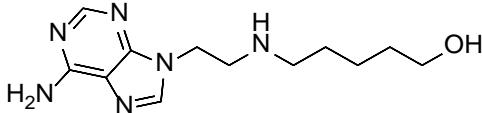


Product data sheet



MedKoo Cat#: 584422 Name: NB-001 CAS: 686301-48-4 Chemical Formula: C ₁₂ H ₂₀ N ₆ O Exact Mass: 264.1699 Molecular Weight: 264.333		
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:

NB-001 is an analgesic that can be used to treat bone cancer pain partially due to the inhibition of AC1 in anterior cingulate cortex.

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
TBD	TBD	TBD

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.78 mL	18.92 mL	37.83 mL
5 mM	0.76 mL	3.78 mL	7.57 mL
10 mM	0.38 mL	1.89 mL	3.78 mL
50 mM	0.08 mL	0.38 mL	0.76 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

TBD

In vivo study

1. Wang W, Chen QY, Zhao P, Zhong J, Wang Y, Li X, Zhuo M, Chen X. Human safety study of a selective neuronal adenylyl cyclase 1 inhibitor NB001 which relieves the neuropathic pain and blocks ACC in adult mice. Mol Pain. 2022 Apr;18:17448069221089596. doi: 10.1177/17448069221089596. PMID: 35266830; PMCID: PMC9112679.

2. Liu RH, Shi W, Zhang YX, Zhuo M, Li XH. Selective inhibition of adenylyl cyclase subtype 1 reduces inflammatory pain in chicken of gouty arthritis. Mol Pain. 2021 Jan-Dec;17:17448069211047863. doi: 10.1177/17448069211047863. PMID: 34761717; PMCID: PMC8591642.

7. Bioactivity

Biological target:

NB001 (HTS 09836) is an adenylyl cyclase 1 (AC1) inhibitor.

In vitro activity

TBD

Product data sheet



In vivo activity

Intragastric administration of hNB001 (40 mg/kg) given 45 min before the behavior test produced a significant analgesic effect (CPN group: 1.0 ± 0.1 g before the surgery, 0.3 ± 0.05 g at 7 days after the surgery, 0.5 ± 0.1 g after the application of hNB001, $n = 13$ in CPN group, $F_{(2,36)} = 7.990$; sham group: 0.9 ± 0.09 g before the surgery, 0.9 ± 0.1 g at 7 days after the surgery, 1.0 ± 0.2 g after the application of hNB001, $n = 10$ in sham group, $F_{(2,27)} = 0.798$, $p < 0.001$) (Figure 5(b)).

Reference: Mol Pain. 2022 Apr;18:17448069221089596. <https://pubmed.ncbi.nlm.nih.gov/35266830/>

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.