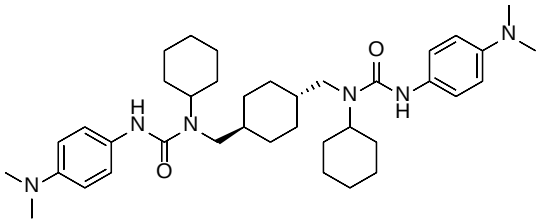
Product data sheet

MedKoo Cat#: 563381 Name: NTE-122 CAS: 166967-84-6 Chemical Formula: $C_{38}H_{58}N_6O_2$ Exact Mass: 630.4621 Molecular Weight: 630.922	
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:
NTE-122 is a potent, selective and competitive inhibitor of Acyl-CoA:cholesterol acyltransferase (ACAT).

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	1.58 mL	7.92 mL	15.85 mL
5 mM	0.32 mL	1.58 mL	3.17 mL
10 mM	0.16 mL	0.79 mL	1.58 mL
50 mM	0.03 mL	0.16 mL	0.32 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, Azuma Y, Kawasaki T, Ikemoto K, Ohno K, Yamada T, Yamasaki M, Nobuhara Y. Effects of NTE-122, a novel acyl-CoA:cholesterol acyltransferase inhibitor, on cholesterol esterification and high-density lipoprotein-induced cholesterol efflux in macrophages. Jpn J Pharmacol. 1999 Feb;79(2):159-67. doi: 10.1254/jjp.79.159. PMID: 10202851.
2, Azuma Y, Kawasaki T, Ohno K, Seto J, Yamada T, Yamasaki M, Nobuhara Y. Effects of NTE-122, a novel acyl-CoA:cholesterol acyltransferase inhibitor, on cholesterol esterification and secretions of apolipoprotein B-containing lipoprotein and bile acids in HepG2. Jpn J Pharmacol. 1999 Feb;79(2):151-8. doi: 10.1254/jjp.79.151. PMID: 10202850.

In vivo study

1. Azuma Y, Date K, Ohno K, Matsushiro S, Nobuhara Y, Yamada T. NTE-122, an acyl-coa:cholesterol acyltransferase inhibitor, prevents the progression of atherogenesis in cholesterol-fed rabbits. Jpn J Pharmacol. 2001 May;86(1):120-3. doi: 10.1254/jjp.86.120. PMID: 11430463.
2. Azuma Y, Seto J, Ohno K, Mikami H, Yamada T, Yamasaki M, Chiba M, Nobuhara Y. Effects of NTE-122, an acyl-CoA:cholesterol acyltransferase inhibitor, on cholesterol esterification and lipid secretion from CaCo-2 cells, and cholesterol absorption in rats. Jpn J Pharmacol. 1999 May;80(1):81-4. doi: 10.1254/jjp.80.81. PMID: 10446760.

7. Bioactivity
Biological target:

NTE-122 is a potent, selective and competitive inhibitor of Acyl-CoA:cholesterol acyltransferase (ACAT).

Product data sheet

In vitro activity

NTE-122 markably inhibited [3H]oleate incorporation into cholesteryl esters in HepG2 cells incubated with 5 microg/ml 25-hydroxycholesterol as a stimulus for ACAT (IC50=6.0 nM). NTE-122 pronouncedly inhibited the secretion of radiolabeled cholesteryl esters in proportion to the inhibition of cellular cholesterol esterification, and it significantly reduced the secretion of radiolabeled triglycerides and apoB mass in HepG2 cells incubated with 25-hydroxycholesterol.

Reference: Jpn J Pharmacol. 1999 Feb;79(2):159-67. https://pubmed.ncbi.nlm.nih.gov/10202850/

In vivo activity

NTE-122 (1, 3 and 10 mg/kg per day) lowered the total cholesterol levels in both plasma and liver dose-dependently (by 99% and 94% at 10 mg/kg per day, respectively). In the aortic wall of the rabbits given NTE-122, the atherosclerotic lesion area in both aortic arch and thoracic aorta were dose-dependently reduced (by 100% at 10 mg/kg per day), and the total cholesterol content in aortic arch was also lowered significantly at more than 3 mg/kg per day. These results suggest that NTE-122 is capable of exhibiting anti-atherosclerotic effects.

Reference: Jpn J Pharmacol. 2001 May;86(1):120-3. https://pubmed.ncbi.nlm.nih.gov/11430463/

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.