

Product data sheet



MedKoo Cat#: 525442 Name: Neoseptin-3 CAS: 1622863-21-1 Chemical Formula: C ₂₉ H ₃₄ N ₂ O ₄ Exact Mass: 474.2519 Molecular Weight: 474.601	
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:

Neoseptin-3 is a novel specific agonist of the mouse TLR4 (mTLR4)/myeloid differentiation factor 2 (MD-2) complex.

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	100.0	210.70

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.11 mL	10.54 mL	21.07 mL
5 mM	0.42 mL	2.11 mL	4.21 mL
10 mM	0.21 mL	1.05 mL	2.11 mL
50 mM	0.04 mL	0.21 mL	0.42 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

Wang Y, Su L, Morin MD, Jones BT, Whitby LR, Surakattula MM, Huang H, Shi H, Choi JH, Wang KW, Moresco EM, Berger M, Zhan X, Zhang H, Boger DL, Beutler B. TLR4/MD-2 activation by a synthetic agonist with no similarity to LPS. Proc Natl Acad Sci U S A. 2016 Feb 16;113(7):E884-93. doi: 10.1073/pnas.1525639113. Epub 2016 Feb 1. Erratum in: Proc Natl Acad Sci U S A. 2016 Apr 5;113(14):E2096. Erratum in: Proc Natl Acad Sci U S A. 2021 Jun 15;118(24): PMID: 26831104; PMCID: PMC4763747.

In vivo study

TBD

7. Bioactivity

Biological target:

Neoseptin 3 is a Toll-like receptor 4/myeloid differentiation factor 2 (mTLR4/MD-2) agonist with an EC₅₀ of 18.5 μM.

In vitro activity

Neoseptin-3 activates mTLR4/MD-2 independently of CD14 and triggers canonical myeloid differentiation primary response gene 88 (MyD88)- and Toll-interleukin 1 receptor (TIR) domain-containing adaptor inducing IFN-beta (TRIF)-dependent signaling. The crystal structure mTLR4/MD-2/Neoseptin-3 at 2.57-Å resolution reveals that Neoseptin-3 binds as an asymmetrical dimer within the hydrophobic pocket of MD-2, inducing an active receptor complex similar to that induced by lipid A.

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Reference: Proc Natl Acad Sci U S A. 2016 Feb 16;113(7):E884-93. <https://pubmed.ncbi.nlm.nih.gov/26831104/>

In vivo activity

TBD

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.