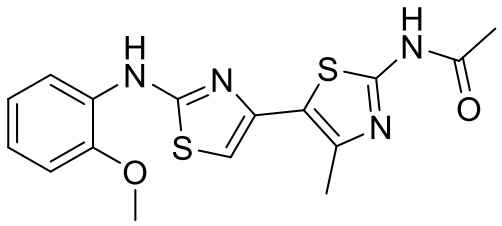
Product data sheet

MedKoo Cat#: 564581 Name: JNJ0966 CAS: 315705-75-0 Chemical Formula: $C_{16}H_{16}N_4O_2S_2$ Exact Mass: 360.0715 Molecular Weight: 360.45	
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:
JNJ0966 is a highly selective allosteric inhibitor of matrix metalloproteinase-9 (MMP-9).

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	63.34	175.72

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.77 mL	13.87 mL	27.74 mL
5 mM	0.55 mL	2.77 mL	5.55 mL
10 mM	0.28 mL	1.39 mL	2.77 mL
50 mM	0.06 mL	0.28 mL	0.55 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. Liu ZZG, Taiyab A, West-Mays JA. MMP9 Differentially Regulates Proteins Involved in Actin Polymerization and Cell Migration during TGF-β-Induced EMT in the Lens. Int J Mol Sci. 2021 Nov 5;22(21):11988. doi: 10.3390/ijms222111988. PMID: 34769418; PMCID: PMC8584335.
2. Boon L, Ugarte-Berzal E, Martens E, Fiten P, Vandooren J, Janssens R, Blanter M, Yu K, Boon M, Struyf S, Proost P, Opdenakker G. Citrullination as a novel posttranslational modification of matrix metalloproteinases. Matrix Biol. 2021 Jan;95:68-83. doi: 10.1016/j.matbio.2020.10.005. Epub 2020 Nov 4. PMID: 33157227.

In vivo study

1. Scannevin RH, Alexander R, Haarlander TM, Burke SL, Singer M, Huo C, Zhang YM, Maguire D, Spurlino J, Deckman I, Carroll KI, Lewandowski F, Devine E, Dzordzorme K, Tounge B, Milligan C, Bayoumy S, Williams R, Schalk-Hihi C, Leonard K, Jackson P, Todd M, Kuo LC, Rhodes KJ. Discovery of a highly selective chemical inhibitor of matrix metalloproteinase-9 (MMP-9) that allosterically inhibits zymogen activation. J Biol Chem. 2017 Oct 27;292(43):17963-17974. doi: 10.1074/jbc.M117.806075. Epub 2017 Aug 31. PMID: 28860188; PMCID: PMC5663893.

7. Bioactivity
Biological target:

JNJ0966 is a highly selective MMP-9 zymogen inhibitor with an IC_{50} of 440 nM.

Product data sheet

In vitro activity

The efficacy of the inhibitor behaves in a dose-dependent manner, and this study determined that a 2-h pre-treatment with 20 μM of JNJ0966 could prevent the elongation of rat LECs that have been exposed to 6 ng/mL of TGF-β for 48 h. Immunofluorescence analysis was conducted to further confirm the efficacy of JNJ0966.

Reference: Int J Mol Sci. 2021 Nov 5;22(21):11988. https://pubmed.ncbi.nlm.nih.gov/34769418/

In vivo activity

JNJ0966 was efficacious in reducing disease severity in a mouse experimental autoimmune encephalomyelitis model, demonstrating the viability of this therapeutic approach.

Reference: J Biol Chem. 2017 Oct 27;292(43):17963-17974. https://pubmed.ncbi.nlm.nih.gov/28860188/

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.