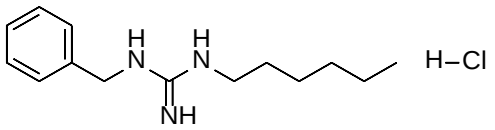
Product data sheet

MedKoo Cat#: 555784 Name: NS-3-008 HCl CAS: 1172854-54-4 (HCl) Chemical Formula: $C_{14}H_{24}ClN_3$ Molecular Weight: 269.817	
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:

NS-3-008 is an orally active transcriptional inhibitor of G0/G1 switch 2 (G0s2). NS-3-008 can be used for chronic kidney disease. NS-3-008 inhibited the transcription of G0s2 with a half-maximal inhibitory concentration (IC50) of 2.25 μM. Moreover, treatment of wild-type 5/6Nx mice with NS-3-008 (5 mg/kg, P.O.) resulted in decreased levels of G0s2 and Ccl2 mRNA in the kidneys.

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	125.0	463.28
Water	125.0	463.28

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.71 mL	18.53 mL	37.06 mL
5 mM	0.74 mL	3.71 mL	7.41 mL
10 mM	0.37 mL	1.85 mL	3.71 mL
50 mM	0.07 mL	0.37 mL	0.74 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

Matsunaga N, Ikeda E, Kakimoto K, Watanabe M, Shindo N, Tsuruta A, Ikeyama H, Hamamura K, Higashi K, Yamashita T, Kondo H, Yoshida Y, Matsuda M, Ogino T, Tokushige K, Itcho K, Furuichi Y, Nakao T, Yasuda K, Doi A, Amamoto T, Aramaki H, Tsuda M, Inoue K, Ojida A, Koyanagi S, Ohdo S. Inhibition of G0/G1 Switch 2 Ameliorates Renal Inflammation in Chronic Kidney Disease. EBioMedicine. 2016 Nov;13:262-273. doi: 10.1016/j.ebiom.2016.10.008. Epub 2016 Oct 6. PMID: 27745900; PMCID: PMC5264248.

In vivo study

Matsunaga N, Ikeda E, Kakimoto K, Watanabe M, Shindo N, Tsuruta A, Ikeyama H, Hamamura K, Higashi K, Yamashita T, Kondo H, Yoshida Y, Matsuda M, Ogino T, Tokushige K, Itcho K, Furuichi Y, Nakao T, Yasuda K, Doi A, Amamoto T, Aramaki H, Tsuda M, Inoue K, Ojida A, Koyanagi S, Ohdo S. Inhibition of G0/G1 Switch 2 Ameliorates Renal Inflammation in Chronic Kidney Disease. EBioMedicine. 2016 Nov;13:262-273. doi: 10.1016/j.ebiom.2016.10.008. Epub 2016 Oct 6. PMID: 27745900; PMCID: PMC5264248.

7. Bioactivity

Biological target:

NS-3-008 hydrochloride is an orally active transcriptional inhibitor of G0/G1 switch 2 (G0s2) with an IC_{50} of 2.25 μM.

Product data sheet

In vitro activity

This study carried out high-throughput screening of 9600 small compounds to identify novel transcriptional inhibitors of G0s2 (Figs. S4, S5). NS-3-008 inhibited the transcription of G0s2 with a half-maximal inhibitory concentration (IC_{50}) of 2.25 μM (Fig. S6).

Reference: EBioMedicine. 2016 Nov;13:262-273. https://pubmed.ncbi.nlm.nih.gov/27745900/

In vivo activity

Moreover, treatment of wild-type 5/6Nx mice with NS-3-008 (5 mg/kg, P.O.) resulted in decreased levels of G0s2 and Ccl2 mRNA in the kidneys (Fig. 7A). The phosphorylation of Stat5 and p65 protein was decreased in wild-type 5/6Nx mice treated with NS-3-008 (Fig. 7B), and SUN concentrations and renal caspase 3/7 activity decreased in 5/6Nx mice treated with NS-03-08 (Fig. 7). Finally, the F4/80-positive area and F4/80 protein levels were decreased in 5/6Nx mice treated with NS-3-008 (Fig. 7D).

Reference: EBioMedicine. 2016 Nov;13:262-273. https://pubmed.ncbi.nlm.nih.gov/27745900/

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.