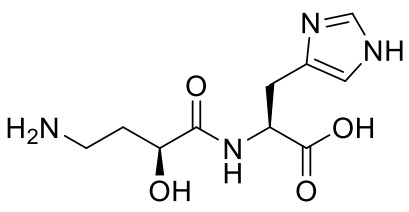


Product data sheet



MedKoo Cat#: 564673 Name: Carnostatine CAS#: NONE Chemical Formula: C ₁₀ H ₁₆ N ₄ O ₄ Exact Mass: 256.1172 Molecular Weight: 256.26		
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:

Carnostatine is a potent and selective carnosinase (CN1) inhibitor.

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
Water	250	854.06

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.90 mL	19.51 mL	39.02 mL
5 mM	0.78 mL	3.90 mL	7.80 mL
10 mM	0.39 mL	1.95 mL	3.90 mL
50 mM	0.08 mL	0.39 mL	0.78 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. Qiu J, Hauske SJ, Zhang S, Rodriguez-Niño A, Albrecht T, Pastene DO, van den Born J, van Goor H, Ruf S, Kohlmann M, Teufel M, Krämer BK, Hammes HP, Peters V, Yard BA, Kannt A. Identification and characterisation of carnostatine (SAN9812), a potent and selective carnosinase (CN1) inhibitor with in vivo activity. *Amino Acids*. 2019 Jan;51(1):7-16. doi: 10.1007/s00726-018-2601-z. Epub 2018 Jun 20. PMID: 29922921.

In vivo study

1. Qiu J, Hauske SJ, Zhang S, Rodriguez-Niño A, Albrecht T, Pastene DO, van den Born J, van Goor H, Ruf S, Kohlmann M, Teufel M, Krämer BK, Hammes HP, Peters V, Yard BA, Kannt A. Identification and characterisation of carnostatine (SAN9812), a potent and selective carnosinase (CN1) inhibitor with in vivo activity. *Amino Acids*. 2019 Jan;51(1):7-16. doi: 10.1007/s00726-018-2601-z. Epub 2018 Jun 20. PMID: 29922921.

7. Bioactivity

Biological target:

Carnostatine hydrochloride (SAN9812 hydrochloride) is a potent and selective carnosinase 1 (CN1) inhibitor with a K_i of 11 nM for human recombinant CN1.

In vitro activity

Product data sheet



Carnostatine (SAN9812) also inhibits CN1 activity in human serum and serum of transgenic mice-overexpressing human CN1. Carnostatine, with an IC50 value of 18 nM on human recombinant CN1 at a carnosine concentration of 200 μ M, i.e., close to the Km of 190 μ M.

Reference: Amino Acids. 2019 Jan;51(1):7-16. <https://dx.doi.org/10.1007/s00726-018-2601-z>

In vivo activity

Subcutaneous administration of 30 mg/kg Carnostatine (SAN9812) leads to a sustained reduction in circulating CN1 activity in human CN1 transgenic (TG) mice. Simultaneous administration of Carnosine and Carnostatine increases carnosine levels in plasma and kidney by up to 100-fold compared to treatment-naïve CN1-overexpressing mice.

Reference: Amino Acids. 2019 Jan;51(1):7-16. <https://dx.doi.org/10.1007/s00726-018-2601-z>

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.