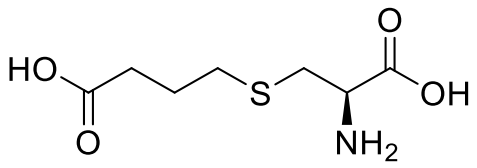
Product data sheet

MedKoo Cat#: 573824 Name: S-(3-Carboxypropyl)-L-cysteine CAS#: 30845-11-5 Chemical Formula: $C_7H_{13}NO_4S$ Exact Mass: 207.0565 Molecular Weight: 207.24	
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:
S-(3-Carboxypropyl)-L-cysteine is a thioether derivative of L-cysteine.

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
N/A	N/A	N/A

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	4.83 mL	24.13 mL	48.25 mL
5 mM	0.97 mL	4.83 mL	9.65 mL
10 mM	0.48 mL	2.41 mL	4.83 mL
50 mM	0.10 mL	0.48 mL	0.97 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. Yadav PK, Vitvitsky V, Kim H, White A, Cho US, Banerjee R. S-3-Carboxypropyl-l-cysteine specifically inhibits cystathionine γ-lyase-dependent hydrogen sulfide synthesis. J Biol Chem. 2019 Jul 12;294(28):11011-11022. doi: 10.1074/jbc.RA119.009047. Epub 2019 Jun 3. PMID: 31160338; PMCID: PMC6635441.

In vivo study

N/A

7. Bioactivity
Biological target:

S-(3-Carboxypropyl)-L-cysteine is a thioether derivative of L-cysteine.

In vitro activity

CPC was a competitive inhibitor with respect to both cystathionine and cysteine in the canonical and H_2S synthesis reactions, respectively. The lower K_i value in the cystathionine (50 ± 3 μm) *versus* cysteine (180 ± 15 μm) cleavage assay suggests that CPC competes more effectively against the longer cystathionine *versus* the shorter cysteine substrate. The $K_{d(app)}$ for CPC binding to CSE was 26 ± 3 μm. In cell culture, CPC inhibited the transsulfuration flux, an indicator of the canonical CSE reaction; ≥80% inhibition was observed in HepG2 cells at a concentration of 2.5 mm CPC (Fig. 5*A*).

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Reference: J Biol Chem. 2019 Jul 12;294(28):11011-11022. https://pubmed.ncbi.nlm.nih.gov/31160338/

In vivo activity

N/A

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.