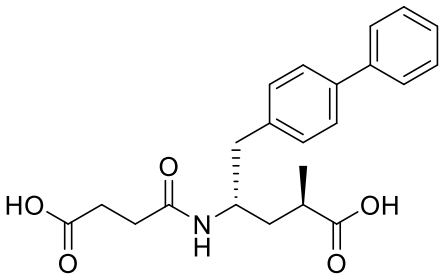
Product data sheet

MedKoo Cat#: 206449 Name: Sacubitrilat CAS#: 149709-44-4 Chemical Formula: $C_{22}H_{25}NO_5$ Exact Mass: 383.1733 Molecular Weight: 383.444	
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:
Sacubitrilat, also known as LBQ-657, is endopeptidase inhibitor. Sacubitril is a prodrug that is activated to LBQ657 by de-ethylation via esterases. LBQ657 inhibits the enzyme neprilysin, which is responsible for the degradation of atrial and brain natriuretic peptide, two blood pressure lowering peptides that work mainly by reducing blood volume.

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
DMF	30	78.24
DMSO	77	200.81
Ethanol	77	200.81
Ethanol:PBS (pH 7.2) (1:1)	0.5	1.30

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.61 mL	13.04 mL	26.08 mL
5 mM	0.52 mL	2.61 mL	5.22 mL
10 mM	0.26 mL	1.30 mL	2.61 mL
50 mM	0.05 mL	0.26 mL	0.52 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

N/A

In vivo study

1. Eiringhaus J, Wünsche CM, Tirilomis P, Herting J, Bork N, Nikolaev VO, Hasenfuss G, Sossalla S, Fischer TH. Sacubitrilat reduces pro-arrhythmogenic sarcoplasmic reticulum Ca2+ leak in human ventricular cardiomyocytes of patients with end-stage heart failure. ESC Heart Fail. 2020 Oct;7(5):2992-3002. doi: 10.1002/ehf2.12918. Epub 2020 Jul 25. PMID: 32710603; PMCID: PMC7586991.

7. Bioactivity
Biological target:

Sacubitrilat (Desethyl Sacubitril) is an active neprilysin (NEP) inhibitor.

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In vitro activity

N/A

In vivo activity

This study demonstrates that neprilysin inhibitor Sac directly improves Ca^{2+} homeostasis in human end-stage HF by reducing pro-arrhythmogenic SR Ca^{2+} leak without acutely affecting systolic Ca^{2+} release and inotropy.

Reference: ESC Heart Fail. 2020 Oct;7(5):2992-3002. https://pubmed.ncbi.nlm.nih.gov/32710603/

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.