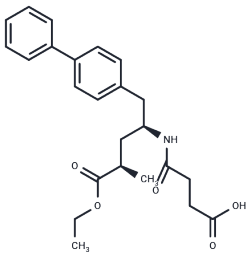
Data Sheet (Cat.No.T4574)

TargetMol

Sacubitril

Chemical Properties



CAS No. : 149709-62-6

Formula: C24H29NO5

Molecular Weight: 411.49

Storage: Pure form: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Sacubitril (AHU-377) is a potent NEP inhibitor with an IC50 of 5 nM and is a component of the heart failure medicine LCZ696.
Targets(IC50)	Neprilysin
In vitro	LCZ696 is a single molecule that is comprised of molecular moieties of valsartan, an ARB, and Sacubitril, a neprilysin inhibitor (1:1 ratio). Sacubitril is converted by enzymatic cleavage of the ethyl ester into the active neprilysin inhibiting metabolite LBQ657[2]. The inactive NEPi precursor, Sacubitril, does not inhibit collagen accumulation in fibroblasts nor cardiac myocyte hypertrophy. In cardiac fibroblasts, the active NEPi LBQ657 had no discernible effects. In contrast, LBQ657 modestly inhibits cardiac myocyte hypertrophy [3].
In vivo	In humans, Sacubitril (tmax0.5-1.1 h) are absorbed quickly. Sacubitril is converted rapidly into LBQ657 with its tmaxbeing reached in 1.9-3.5 h. Mean t1/2values for the biologically active LBQ657 is 9.9-11.1 h[2].In vehicle-treated dogs, ANF increases urinary sodium excretion from 17.3±3.6 to 199.5±18.4 pequivkglmin. This effect is potentiated significantly in animals which receive Sacubitril. Urinary volume is also potentiated in animals which receive an iv administration of Sacubitril[1].

Solubility Information

Solubility	DMSO: 27.5 mg/mL (66.83 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.86 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4302 mL	12.151 mL	24.3019 mL
5 mM	0.486 mL	2.4302 mL	4.8604 mL
10 mM	0.243 mL	1.2151 mL	2.4302 mL
50 mM	0.0486 mL	0.243 mL	0.486 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Ksander GM,etal.Dicarboxylic acid dipeptide neutral endopeptidase inhibitors.J Med Chem. 1995 May 12;38(10):1689-700.

Voors AA,etal.The potential role of valsartan + AHU377 (LCZ696) in the treatment of heart failure.Expert Opin Investig Drugs. 2013 Aug;22(8):1041-7.

von Lueder TG,etal.Angiotensin receptor neprilysin inhibitor LCZ696 attenuates cardiac remodeling and dysfunction after myocardial infarction by reducing cardiac fibrosis and hypertrophy. Circ Heart Fail. 2015 Jan;8(1):71-8.

Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481