Data Sheet (Cat.No.T6370)

TargetMol

AEBSF hydrochloride

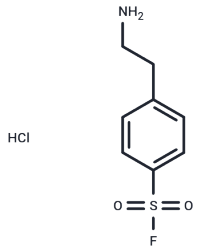
Chemical Properties

CAS No. : 30827-99-7

Formula: C8H11ClFNO2S

Molecular Weight: 239.69

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



Biological Description

Description	AEBSF hydrochloride (Pefabloc SC) is an irreversible inhibitor of serine proteases, such as chymotrypsin, kallikrein, thrombin, plasmin, and trypsin.
Targets(IC50)	Influenza Virus,Serine Protease,Thrombin
In vitro	In a mouse model of cockroach allergen-induced asthma, AEBSF was able to mitigate respiratory reactions and potential inflammation. Intraperitoneal injection of 76.8 mg/kg AEBSF daily in mice lethally inoculated with Toxoplasma gondii extended their survival period.
In vivo	AEBSF is a serine protease inhibitor that suppresses the lysis of leukemia cells by macrophages without inhibiting the secretion of TNF-α and IL-1β by these cells. In five different human cell lines, AEBSF inhibits the formation of amyloid-beta (Aβ) by blocking the secretion of both neural and non-neural β-secretase products. Additionally, AEBSF disrupts embryonic growth within the endometrium and modifies protein secretion mechanisms to prevent the adhesion of HeLa cells in human umbilical vein endothelial cells.
Cell Research	The HeLa cells suspended in RPMI-1640 media containing 10% FCS are plated into each well of a 96-well microplate (5×103 cells/200 μL/well). After incubation for 24 h at 37°C, cells are treated with different doses of AEBSF (0, 25, 50, 100 μg/mL) for 48 h. Then, 20 μL fresh 3-(4,5)-dimethylthiahiazo (-z-y1)-3,5-diphenytetrazoliumromide (MTT) reagent (5 μg/μL) is added into each well, and cells are cultured at 37°C in 5% CO2 for another 4 h. The media are discarded carefully, and 150 μL DMSO is added. Absorbance is read on a microplate reader at dual wavelengths of 540 and 620 nm.

Solubility Information

Solubility	H2O: 24 mg/mL (100.13 mM),Sonication is recommended. DMSO: 247 mg/mL (1030.5 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: 5 mg/mL (20.86 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*

In vivo Formulation	*vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.1721 mL	20.8603 mL	41.7206 mL
5 mM	0.8344 mL	4.1721 mL	8.3441 mL
10 mM	0.4172 mL	2.086 mL	4.1721 mL
50 mM	0.0834 mL	0.4172 mL	0.8344 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

Citron M, et al. Neuron. 1996, 17(1), 171-179.
Jiang T Y, Pan Y F, Wan Z H, et al. PTEN status determines chemosensitivity to proteasome inhibition in cholangiocarcinoma. Science Translational Medicine. 2020, 12(562).
Jiang T Y, Feng X F, Fang Z, et al. PTEN deficiency facilitates the therapeutic vulnerability to proteasome inhibitor bortezomib in gallbladder cancer. Cancer Letters. 2021, 501: 187-199.
Nakabo Y, et al. J Leukoc Biol. 1996, 60(3), 328-336.
Buitrago-Rey R. et al. J Antimicrob Chemother. 2002, 49(5), 871-874.
Jiang YH, et al. Contraception. 2011, 84(6), 642-648.
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Jiang T Y, Pan Y F, Wan Z H, et al. PTEN status determines chemosensitivity to proteasome inhibition in cholangiocarcinoma[J]. Science Translational Medicine. 2020, 12(562).