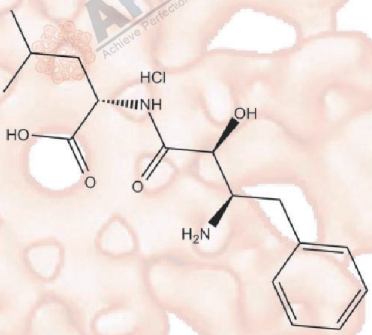
Product Data Sheet

Bestatin hydrochloride



Cat. No.: A8621

CAS No.: 65391-42-6

Formula: C16H25ClN2O4

M.Wt: 344.83

Synonyms:

Target: Proteases

Pathway: Aminopeptidase

Storage: Store at -20°C

Solvent & Solubility

In Vitro

⩾125 mg/mL in DMSO; ⩾34.2 mg/mL in H2O; ⩾68 mg/mL in EtOH

Preparing Stock Solutions

Concentration \ Mass / Solvent	1mg	5mg	10mg
1 mM	2.9000 mL	14.4999 mL	28.9998 mL
5 mM	0.5800 mL	2.9000 mL	5.8000 mL
10 mM	0.2900 mL	1.4500 mL	2.9000 mL

Please refer to the solubility information to select the appropriate solvent.

Biological Activity

Shortsummary	Inhibitor of aminopeptidase N (APN)/CD13 and aminopeptidase B.
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	D. discoideum cells, human umbilical vein endothelial cells
Preparation method:	Soluble in DMSO. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.
Reacting conditions:	600 μM, 48 h

	Applications:	Bestatin (600 μM)-treated cells progressed slower through the cell cycle due to decreased rate of cell growth and the frequency of cell division. Bestatin inhibited the frequency of mitosis and the inherent multinuclearity in D. discoideum cells, and was not cytotoxic to D. discoideum cells at 0-600 μM. Bestatin inhibited aminopeptidase activity in lysates of PsaA-GFP- and GFP-expressing cells by 69.39% ± 10.5% and 39.93% ± 18.7% of control, respectively. Bestatin (1-100 μg/ml) dose-dependently inhibited the Ala-MCA-hydrolysing activity of HUVECs. Bestatin inhibited the tube-like formation of HUVECs.
In Vivo	**Animal experiment**	
	Animal models:	Inbred 6-week-old female C57BL/6 mice bearing B16-BL6 melanoma xenografts
	Dosage form:	Oral administration, 100-200 mg/kg/day; Intraperitoneal injection, 50-100 mg/kg/day
	Applications:	In a mouse dorsal air sac assay, oral administration of bestatin (100-200 mg/kg/day) significantly inhibited melanoma cell-induced angiogenesis. After the orthotopic implantation of B16-BL6 melanoma cells into mice, bestatin administration (50-100 mg/kg/day, i.p.) reduced the number of vessels oriented towards the established primary tumor mass on the dorsal side of mice.
	Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

Product Citations

See more customer validations on www.apexbt.com.

References

[1]. Poloz Y, Catalano A, O'Day D H. Bestatin inhibits cell growth, cell division, and spore cell differentiation in Dictyostelium discoideum[J]. Eukaryotic cell, 2012, 11(4): 545-557.

[2]. Aozuka Y, Koizumi K, Saitoh Y, et al. Anti-tumor angiogenesis effect of aminopeptidase inhibitor bestatin against B16-BL6 melanoma cells orthotopically implanted into syngeneic mice[J]. Cancer letters, 2004, 216(1): 35-42.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

APExBIO Technology

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