Blasticidin S Hydrochloride

Catalog No.C12671 Batch:C1267103

Product Datasheet

Technical Data

Formula	$C_{17}H_{27}ClN_8O_5$					
Molecular Weight	458.9	**CAS No.**	3513-03-9			
Solubility (25°C)*	In vitro	Water	46 mg/mL (100.23 mM)			
		DMSO	Insoluble			
		Ethanol	Insoluble			
	In vivo (Add solvents to the product individually and in order)	Injection	Clear solution	5%H2O → 1 40%PEG 300 → 2 5%Tween 80 → 3 50%H2O Validated by Capsid Bio labs. Should you need adjustments to this formulation, contact our sales team for custom testing.	4.600mg/ml (10.02mM)	Taking the 1 mL working solution as an example, add 50 μL 92 mg/mL clarified H2O stock solution to 400 μL PEG300, mix evenly to clarify; add 50 μL Tween-80 to the above system, mix evenly to clarify; Then continue to add 500 μL ddH2O to adjust the volume to 1 mL. The mixed solution should be used immediately for optimal results.

* <1 mg/ml means slightly soluble or insoluble.
* Please note that Capsid Bio tests the solubility of all compounds in-house, and the actual solubility may differ slightly from published values. This is normal and is due to slight batch-to-batch variations.
* Room temperature shipping (Stability testing shows this product can be shipped at 2-8°C for storage purposes.)

Preparing Stock Solutions

Biological Activity

Description	Blasticidin S HCl is a nucleoside **antibiotic** isolated from Stretomyces girseochromogenes. It acts by blocking hydrolysis of peptidyl-tRNA induced by release factors and inhibits peptide bond formation. It is used to select transfected cells carrying bsr or BSD resistance genes.
Targets	protein synthesis [1] / DNA synthesis [1]
In vitro	Blasticidin S inhibits protein synthesis by acting on the step of peptide transfer from peptidyl-sRNA to incoming aminoacyl-sRNA. [1] Blasticidin S also significantly inhibits DNA synthesis independent of their effect on protein synthesis. [2] Blasticidin S kills the cells more rapidly than G418, which makes blasticidin S-resistance gene (bsr) a selectable marker for mammalian cells. [3] Besides, Blasticidin S also efficiently binds Cu(II) ions and prevents DNA from metal-induced damage. [4]
In vivo	Blasticidin S HCl is an antibiotic isolated from Stretomyces girseochromogenes that acts as a protein synthesis inhibitor. It is used to select transfected cells carrying bsr or BSD resistance genes.

Protocol (from reference)

Cell Assay:[6]

- **Cell lines**
  HEK293T cells
- **Concentrations**
  5 μg/ml
- **Incubation Time**
  7 days
- **Method**
  Lentivirus infected cells were maintained in 5 μg/ml blasticidin containing culture medium for 7d, with fresh medium exchange every day.

References

https://pubmed.ncbi.nlm.nih.gov/4860846/ https://pubmed.ncbi.nlm.nih.gov/849443/ https://pubmed.ncbi.nlm.nih.gov/1720391/

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RETURN POLICY

Capsid Bio's Unconditional Return Policy ensures a smooth online shopping experience for our customers. If you are in any way unsatisfied with your purchase, you may return any item(s) within 7 days of receiving it. In the event of product quality issues, either protocol related or product related problems, you may return any item(s) within 365 days from the original purchase date. Please follow the instructions below when returning products.

SHIPPING & STORAGE

Capsid Bio products are transported at room temperature. If you receive the product at room temperature, please rest assured, the Capsid Bio Quality Inspection Department has conducted experiments to verify that the normal temperature placement of one month will not affect the biological activity of powder products. After collecting, please store the product according to the requirements described in the datasheet. Most Capsid Bio products are stable under the recommended conditions.

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