Pimonidazole

Catalog No.C14546 Batch:C1454603

Product Datasheet

Technical Data

Formula	$C_{11}H_{18}N_4O_3$					
Molecular Weight	254.29	**CAS No.**	70132-50-2			
Solubility (25°C)*	In vitro	DMSO	51 mg/mL (200.55 mM)			
		Ethanol	51 mg/mL (200.55 mM)			
		Water	Insoluble			
	In vivo (Add solvents to the product individually and in order)	Oral Administration	Homogeneous suspension	CMC-NA	≥5mg/ml	Taking the 1 mL working solution as an example, add 5 mg of this product to 1 ml of CMC-Na solution, mix evenly to obtain a homogeneous suspension with a final concentration of 5 mg/ml.

* <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

Concentration \ Volume \ Mass	1 mg	5 mg	10 mg
1 mM	3.9325 mL	19.6626 mL	39.3252 mL
5 mM	0.7865 mL	3.9325 mL	7.8650 mL
10 mM	0.3933 mL	1.9663 mL	3.9325 mL
50 mM	0.0787 mL	0.3933 mL	0.7865 mL

Biological Activity

Description	Pimonidazole (Ro 03-8799) is a novel **hypoxia marker** used for complementary study of tumor hypoxia and cell proliferation in cervical carcinoma.
In vitro	Pimonidazole has radio-sensitivity and recovery capacity from radiation-induced damage depend on p53 status of the tumor cell.^{[3]}
In vivo	Pimonidazole can overcome radiation resistance in hypoxiaby melanoma cells, which is enhanced by liposome modification.^{[2]}

Protocol (from reference)

Cell Assay:
^{[3]}

- **Cell lines**
  HMV-II human malignant melanoma cells
- **Concentrations**
  0.5 mM
- **Incubation Time**
  1–4 h
- **Method**
  HMV-II cells are seeded by 2,000 cells per well in 96-well culture plates, allowed to adhere for 30 hr in a humidified atmosphere with 5% CO₂ at 37 C, and followed by incubation in a hypoxic condition of 100% N2 set in a glass desicator for 18 hr. The liposomal Pmz or free-Pmz is applied in 100 μL of degassed medium and incubated for 3 hr in a hypoxic condition of 100% N2 set in a glass desicator. After X-ray irradiation, the cells are incubated for 3 hr in a humidified atmosphere with 5% CO2 at 37 C. The cells are confirmed to survive according to either morphological observation or cell viability assay using the redox indicator WST-8.

Animal Study:
^{[2]}

- **Animal Models**
  Human head and neck cancer xenograft model mice (BALB/c athymic nude mice; inoculated with FaDu cells)
- **Dosages**
  200 mg/kg
- **Administration**
  IOCV

References

https://pubmed.ncbi.nlm.nih.gov/9826471/ https://pubmed.ncbi.nlm.nih.gov/27580239/ https://pubmed.ncbi.nlm.nih.gov/22905487/

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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