Product Datasheet

Technical Data

Formula	$C_{82}H_{107}N_5O_{20}$					
Molecular Weight	1482.75	**CAS No.**	195514-80-8			
Solubility (25°C)*	In vitro	DMSO	100 mg/mL (67.44 mM)			
		Ethanol	100 mg/mL (67.44 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.
		Injection	Clear solution	5%Ethanol [1]→ 40%PEG300 [2]→ 5%Tween80 [3]→ 50%ddH2O Validated by Capsid Bio labs. Should you need adjustments to this formulation, contact our sales team for custom testing.	5.000mg/ml (3.37mM)	Taking the 1 mL working solution as an example, add 50 μL of 100 mg/ml clarified Ethanol stock solution to 400 μL of PEG300, mix evenly to clarify it; add 50 μL of Tween80 to the above system, mix evenly to clarify; then continue to add 500 μL of ddH2O to adjust the volume to 1 mL. The mixed solution should be used immediately for optimal results.
				5%DMSO [1]→ 40%PEG300 [2]→ 5%Tween80 [3]→ 50%ddH2O Validated by Capsid Bio labs. Should you need adjustments to this formulation, contact our sales team for custom testing.	5.000mg/ml (3.37mM)	
				5% DMSO [1]→ 95% Corn oil Validated by Capsid Bio labs. Should you need adjustments to this formulation, contact our sales team for custom testing.	5.000mg/ml (3.37mM)	

*<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	0.6744 mL	3.3721 mL	6.7442 mL
5 mM	0.1349 mL	0.6744 mL	1.3488 mL
10 mM	0.0674 mL	0.3372 mL	0.6744 mL
50 mM	0.0135 mL	0.0674 mL	0.1349 mL

Biological Activity

Description	AP20187 (B/B Homodimerizer) is a chemical inducer of dimerization that activates **FKBP-Casp8**.
Targets	FKBP [1] / Casp8 [1]
In vitro	In oligodendrocytes, AP20187 treatment increases the expression of PERK-responsive genes encoding CAATT enhancer binding protein homologous protein (CHOP) and growth arrest and DNA damage 34 (GADD34) in a dose-dependent manner. The activity of PERK signaling in oligodendrocytes can be temporally manipulated by the administration of this compound.[2]
In vivo	AP20187 treatment significantly reduces the number of degenerating axons and increases the density of axons in the demyelinating lesions in the lumbar spinal cord of *PLP/Fv2E-PERK* mice. This compound is also sufficient to activate Fv2E-PERK in oligodendrocytes in the CNS of *PLP/Fv2E-PERK* mice.[2]

Protocol (from reference)

Cell Assay:[2]

- **Cell lines**
  Oligodendrocytes
- **Concentrations**
  1 nM
- **Incubation Time**
  4 h
- **Method**
  After 3 d of differentiation, the cells are treated with 1 nM AP20187 or vehicle for 4 h and are then fixed with cold 4% paraformaldehyde in PBS. The cells are blocked with PBS containing 10% goat serum and 0.1% Triton X-100 and incubate overnight with the primary antibody diluted in blocking solution. Appropriate fluorochrome-labeled secondary antibodies are used for detection.

Animal Study:[2]

- **Animal Models**
  PLP/Fv2E-PERK mice
- **Dosages**
  0.5 mg/kg, 2 mg/kg, 5 mg/kg
- **Administration**
  i.p.

References

https://pubmed.ncbi.nlm.nih.gov/26840489/ https://pubmed.ncbi.nlm.nih.gov/23554479/

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.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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