

TAT-CIRP

Chemical Properties

CAS No. :

Formula: C123H206N56O33

Molecular Weight: 2997.31

Keep away from moisture

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	TAT-CIRP, a trans-activating (Tat) cold-inducible RNA-binding protein-derived peptide, functions as an inhibitor of myeloid differentiation protein 2 (MD2). It has demonstrated significant neuroprotective effects against ischemic and hemorrhagic stroke in mouse models [1].
Targets(IC50)	TLR
In vitro	TAT-CIRP at a concentration of 5 μ M attenuates NMDA-induced (50 μ M; 1 hour) apoptosis and necrosis in neuronal cells through a TLR4-independent pathway [1].
In vivo	TAT-CIRP, at dosages of 5-20mg/kg, mitigates cerebral damage following an ischemic stroke induced by middle cerebral artery occlusion (MCAO) in mice. Tat, which is the transduction domain of the human immunodeficiency virus-type 1, is employed as a control peptide [1]. Administered intravenously to mice at a single dose of 20 mg/kg, TAT-CIRP crosses the blood-brain barrier, attaining a peak concentration (C max) of 4762.6 μ g/L and a half-life of approximately 90 minutes [1]. Moreover, repeated daily intravenous administrations of TAT-CIRP at 20 mg/kg and 100 mg/kg for 7 days exhibited minimal toxicity and proved to be safe in mice [1]. Additionally, TAT-CIRP reduced cerebral ischemic damage in rhesus monkeys [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.3336 mL	1.6682 mL	3.3363 mL
5 mM	0.0667 mL	0.3336 mL	0.6673 mL
10 mM	0.0334 mL	0.1668 mL	0.3336 mL
50 mM	0.0067 mL	0.0334 mL	0.0667 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.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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