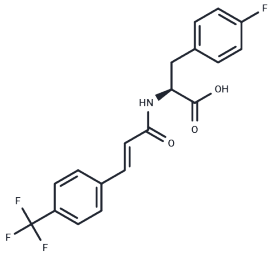
# Data Sheet (Cat.No.T72227)

TargetMol

## PI3K/Akt/CREB activator 1

### Chemical Properties



CAS No. : 2708177-73-3

Formula: C19H15F4NO3

Molecular Weight: 381.32

Storage: Store at low temperature
Pure form: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

| | |
|---|---|
| Description | PI3K/Akt/CREB activator 1 (AE-18) is a selective inducible nitric oxide synthase (iNOS) inhibitor that crosses the blood-brain barrier, reduces infarct size and restores blood supply deficits after ischemia-reperfusion in rats, and is used in studies of vascular dementia and Parkinson's disease. |
| Targets(IC50) | Epigenetic Reader Domain,Akt,PI3K |
| In vitro | PI3K/Akt/CREB activator 1 (Compound AE-18) (10 and 20 μM; 48 hr treatment) enhances BDNF expression in Neuro-2a cells through activation of the PI3K/Akt/CREB pathway, which promotes the formation of neurites and cell proliferation.<br>Treatment of neurons with 10 and 20 μM PI3K/Akt/CREB activator 1 enhances the differentiation of cultured hippocampal neurons and promotes axonal and dendritic polarity formation through the PI3K/Akt signaling pathway. [1] |
| In vivo | In male Sprague-Dawley rats in a chronic cerebral hypoperfusion (CCH) model, gavage of 5 and 10 mg/kg PI3K/Akt/CREB activator 1 promoted the recovery of cerebral blood flow (CBF) after bilateral common carotid artery ligation (BCCAO).<br>PI3K/Akt/CREB activator 1 (5 and 10 mg/kg; by gavage; for 5 consecutive days) attenuated learning and memory impairments in a rat model of CCH, while alleviating hippocampal pathology damage caused by BCCAO. [1] |

### Solubility Information

| | |
|---|---|
| Solubility | DMSO: 200 mg/mL (524.49 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 5 mg/mL (13.11 mM),Sonication is recommended.<br>*Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.* |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.6225 mL | 13.1123 mL | 26.2247 mL |
| 5 mM | 0.5245 mL | 2.6225 mL | 5.2449 mL |
| 10 mM | 0.2622 mL | 1.3112 mL | 2.6225 mL |
| 50 mM | 0.0524 mL | 0.2622 mL | 0.5245 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.

Reference

Feng JH, et al. Protective Effects of 4-Trifluoromethyl-(E)-cinnamoyl]-L-4-F-phenylalanine Acid against Chronic Cerebral Hypoperfusion Injury through Promoting Brain-Derived Neurotrophic Factor-Mediated Neurogenesis. ACS Chem Neurosci. 2022 Nov 2;13(21):3057-3067.