

## PDE4B-IN-6

## Chemical Properties

CAS No. :

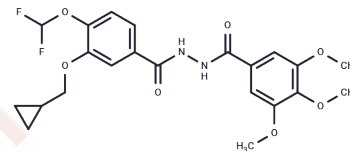
Formula: C<sub>22</sub>H<sub>24</sub>F<sub>2</sub>N<sub>2</sub>O<sub>7</sub>

Molecular Weight: 466.43

Store at low temperature

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	PDE4B-IN-6 (Compound 4i) is a potent and highly selective inhibitor of phosphodiesterase 4B (PDE4B) with an IC <sub>50</sub> of 7.42 nM. As a roflumilast analogue, it exhibits significantly higher selectivity for PDE4B over PDE4A (IC <sub>50</sub> = 1540 nM, ~195-fold) and PDE4C (IC <sub>50</sub> = 1260 nM, ~169-fold). PDE4B-IN-6 exerts anti-inflammatory effects by elevating intracellular cAMP levels and suppressing the expression of the pro-inflammatory cytokine TNF- $\alpha$ . Additionally, it demonstrates good antioxidant properties and low cytotoxicity, making it suitable for research on chronic obstructive pulmonary disease (COPD) and related inflammatory conditions.
Targets(IC <sub>50</sub> )	PDE
In vitro	PDE4B-IN-6 inhibits PDE4B activity with an IC <sub>50</sub> of 7.42 nM, demonstrating high selectivity over PDE4A (195-fold) and PDE4C (169-fold). It effectively increases intracellular cAMP levels and inhibits TNF- $\alpha$ expression, while showing antioxidant activity and low cytotoxicity in cell assays [1].

## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.1439 mL	10.7197 mL	21.4394 mL
5 mM	0.4288 mL	2.1439 mL	4.2879 mL
10 mM	0.2144 mL	1.072 mL	2.1439 mL
50 mM	0.0429 mL	0.2144 mL	0.4288 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

Moussa AM, et al. Design and development of potent roflumilast analogues targeting PDE-4B: selectivity and pharmacokinetic insights. Bioorg Chem. 2025 Dec;167:109201.

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