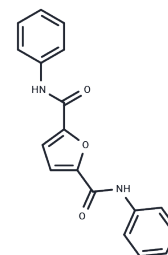


PTP1B-IN-33

Chemical Properties

CAS No. :	77500-30-2
Formula:	C ₁₈ H ₁₄ N ₂ O ₃
Molecular Weight:	306.32
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	PTP1B-IN-33 is a protein tyrosine phosphatase 1B (PTP1B) inhibitor with an IC ₅₀ of 2.45 μM against human PTP1B, showing more than 20-fold selectivity over SHP2. It enhances π-alkyl interactions with PTP1B, thereby promoting closure of the WPD loop. PTP1B-IN-33 can be used in studies on cancer, diabetes, and autoimmune deficiency diseases.
Targets(IC50)	Phosphatase
In vitro	Methods: Human PTP1B and SHP2 PTP proteins were treated with PTP1B-IN-33, and their structural changes and interactions were detected. Results: PTP1B-IN-33 induced a significantly higher degree of WPD loop closure in human PTP1B (5.4 Å) than in human SHP2 PTP (1.2 Å), and enhanced the stability of PTP1B via strong interaction with R47, a residue of the phosphotyrosine (pTyr) loop [1].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.2646 mL	16.3228 mL	32.6456 mL
5 mM	0.6529 mL	3.2646 mL	6.5291 mL
10 mM	0.3265 mL	1.6323 mL	3.2646 mL
50 mM	0.0653 mL	0.3265 mL	0.6529 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

Cao Q, et al. Exploring the effect of active site loops dynamics on PTP1B/SHP2 activity through selective benzamide-based inhibitors. J Biomol Struct Dyn. Published online January 13, 2026.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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