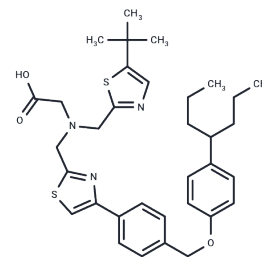


JTT 551

## Chemical Properties

CAS No. : 776309-04-7  
 Formula: C<sub>34</sub>H<sub>43</sub>N<sub>3</sub>O<sub>3</sub>S<sub>2</sub>  
 Molecular Weight: 605.85  
 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	JTT 551 can be used in the research of type 2 diabetes mellitus. JTT 551 is selective a protein tyrosine phosphatase 1B (PTP1B) inhibitor, with Kis of 0.22 μM and 9.3 μM for PTP1B and TCPTP (T-cell protein tyrosine phosphatase), respectively.
Targets(IC50)	Others,Phosphatase
In vitro	JTT-551 exhibits low affinity for CD45 protein tyrosine phosphatase (CD45) and leucocyte common antigen-related (LAR) protein tyrosine phosphatase, with dissociation constants (Kis) greater than 30 μM for both. Simultaneously, it enhances insulin-induced deoxyglucose uptake in a dose-dependent manner at concentrations of 10 and 30 μM. Primarily, JTT-551 acts as a selective inhibitor of protein tyrosine phosphatase 1B (PTP1B), demonstrating Kis of 0.22 μM for PTP1B and 9.3 μM for T-cell protein tyrosine phosphatase (TCPTP), thereby indicating its specificity and potential therapeutic utility in modulating insulin sensitivity.
In vivo	JTT 551 effectively lowers triglyceride (TG) levels at a dosage of 30 mg/kg by Day 7, without impacting insulin and total cholesterol (TC) levels. Additionally, at dosages of 3 mg/kg and 30 mg/kg administered orally (p.o.), this compound demonstrates a dose-dependent reduction in blood glucose levels in db/db mice across multiple time points, specifically on Days 7, 14, and 28.

### Preparing Stock Solutions

---

	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	1.6506 mL	8.2529 mL	16.5057 mL
5 mM	0.3301 mL	1.6506 mL	3.3011 mL
10 mM	0.1651 mL	0.8253 mL	1.6506 mL
50 mM	0.033 mL	0.1651 mL	0.3301 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

Fukuda S, et al. Pharmacological profiles of a novel protein tyrosine phosphatase 1B inhibitor, JTT-55Diabetes Obes Metab. 2010 Apr;12(4):299-306.

**Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins**

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481