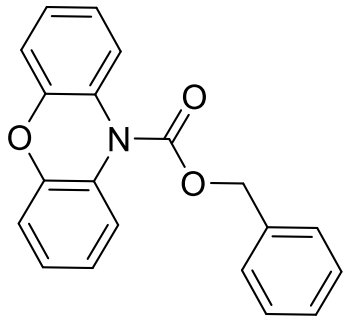
Product data sheet

MedKoo Cat#: 555699 Name: PSB-12054 CAS: 1407632-07-8 Chemical Formula: $C_{20}H_{15}NO_3$ Exact Mass: 317.1052 Molecular Weight: 317.34	
Product supplied as:	Powder
Purity (by HPLC):	≥ 98%
Shipping conditions	Ambient temperature
Storage conditions:	Powder: -20°C 3 years; 4°C 2 years.
	In solvent: -80°C 3 months; -20°C 2 weeks.

1. Product description:
PSB-12054 is a potent P2X4 receptor inhibitor. PSB-12054 has IC(50) of 0.189 μM and good selectivity versus the other human P2X receptor subtypes.

2. CoA, QC data, SDS, and handling instruction
SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under "QC And Documents" section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
To be determined	To be determined	To be determined

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.15 mL	15.76 mL	31.51 mL
5 mM	0.63 mL	3.15 mL	6.30 mL
10 mM	0.32 mL	1.58 mL	3.15 mL
50 mM	0.06 mL	0.32 mL	0.63 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator
Please refer the product web page under section of "Calculator"

6. Recommended literature which reported protocols for in vitro and in vivo study
In vitro study

1. Hernandez-Olmos V, Abdelrahman A, El-Tayeb A, Freudendahl D, Weinhausen S, Müller CE. N-substituted phenoxazine and acridone derivatives: structure-activity relationships of potent P2X4 receptor antagonists. J Med Chem. 2012 Nov 26;55(22):9576-88. doi: 10.1021/jm300845v. Epub 2012 Nov 1. PMID: 23075067.

In vivo study

To be determined

7. Bioactivity
Biological target:

PSB-12054 blocks voltage-gated potassium channels and inhibits inflammatory response by reducing the production of cytokines and increasing the production of anti-inflammatory mediators. PSB-12054 is also a potent antagonist of P2Y receptors. PSB-12054 interacts with other drugs that bind to P2Y receptors, such as carbamazepine.

In vitro activity

In 1321N1 astrocytoma cells transfected with the human P2X4 receptor, PSB-12054 exhibited an IC50 value of 0.189 μM. These results indicate PSB-12054's strong inhibitory effect on ATP-induced calcium influx. PSB-12054 displayed good selectivity, primarily affecting the P2X4 receptor subtype while showing minimal activity against other human P2X receptor subtypes.

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Reference: J Med Chem. 2012 Nov 26;55(22):9576-88. https://pubmed.ncbi.nlm.nih.gov/23075067/

In vivo activity

To be determined

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.