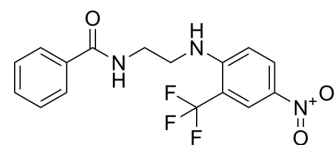


## NPBA

<b>Cat. No.:</b>	HY-139064		
<b>CAS No.:</b>	524033-40-7		
<b>Molecular Formula:</b>	C <sub>16</sub> H <sub>14</sub> F <sub>3</sub> N <sub>3</sub> O <sub>3</sub>		
<b>Molecular Weight:</b>	353.3		
<b>Target:</b>	Potassium Channel		
<b>Pathway:</b>	Membrane Transporter/Ion Channel		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



## SOLVENT & SOLUBILITY

### In Vitro

DMSO : 100 mg/mL (283.05 mM; Need ultrasonic)

Concentration	Mass		
	1 mg	5 mg	10 mg
1 mM	2.8305 mL	14.1523 mL	28.3046 mL
5 mM	0.5661 mL	2.8305 mL	5.6609 mL
10 mM	0.2830 mL	1.4152 mL	2.8305 mL

Please refer to the solubility information to select the appropriate solvent.

### In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 2.5 mg/mL (7.08 mM); Clear solution

## BIOLOGICAL ACTIVITY

### Description

NPBA, a potassium K2P channel TASK-3 (KCNK9) agonist, is a tandem pore domain weak inward rectifying K<sup>+</sup> channel (TWIK2) channel blocker. NPBA suppresses NLRP3 inflammasome activation in macrophages<sup>[1]</sup>.

## REFERENCES

- [1]. Yuanxing Zhi, et al. A novel TWIK2 channel inhibitor binds at the bottom of the selectivity filter and protects against LPS-induced experimental endotoxemia in vivo. *Biochem Pharmacol.* 2023 Dec;218:115894.
- [2]. Fuyun Tian, et al. A Small-Molecule Compound Selectively Activates K2P Channel TASK-3 by Acting at Two Distant Clusters of Residues. *Mol Pharmacol.* 2019 Jul;96(1):26-35.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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