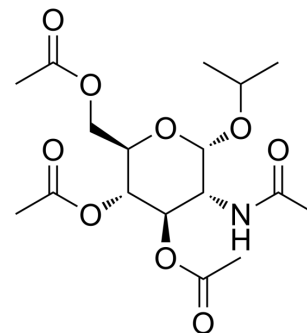


## TLR4-IN-C34

|                           |   |       |         |
|---------------------------|---|-------|---------|
| <b>Cat. No.:</b>          | HY-107575                                       |       |         |
| <b>CAS No.:</b>           | 40592-88-9                                      |       |         |
| <b>Molecular Formula:</b> | C <sub>17</sub> H <sub>27</sub> NO <sub>9</sub> |       |         |
| <b>Molecular Weight:</b>  | 389.4   |       |         |
| <b>Target:</b>            | Toll-like Receptor (TLR)                        |       |         |
| <b>Pathway:</b>           | Immunology/Inflammation                         |       |         |
| <b>Storage:</b>           | Powder  | -20°C | 3 years |
|                           |   | 4°C   | 2 years |
|                           | In solvent                                      | -80°C | 2 years |
|                           |   | -20°C | 1 year  |



### SOLVENT & SOLUBILITY

#### In Vitro

DMSO : 250 mg/mL (642.01 mM; Need ultrasonic)  
 H<sub>2</sub>O : 33.33 mg/mL (85.59 mM; Need ultrasonic)

|                              | Solvent<br>Concentration | Mass      |            |            |
|------------------------------|--------------------------|-----------|------------|------------|
|                              |                          | 1 mg      | 5 mg       | 10 mg      |
| Preparing<br>Stock Solutions | 1 mM                     | 2.5681 mL | 12.8403 mL | 25.6805 mL |
|                              | 5 mM                     | 0.5136 mL | 2.5681 mL  | 5.1361 mL  |
|                              | 10 mM                    | 0.2568 mL | 1.2840 mL  | 2.5681 mL  |

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

#### In Vivo

- Add each solvent one by one: PBS  
Solubility: 7.69 mg/mL (19.75 mM); Clear solution; Need ultrasonic and warming and heat to 60°C
- Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline  
Solubility: ≥ 6.25 mg/mL (16.05 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)  
Solubility: ≥ 6.25 mg/mL (16.05 mM); Clear solution
- Add each solvent one by one: 10% DMSO >> 90% corn oil  
Solubility: ≥ 6.25 mg/mL (16.05 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

TLR4-IN-C34 is an orally active TLR4 inhibitor and reduces systemic inflammation in models of endotoxemia and necrotizing enterocolitis<sup>[1][2]</sup>.

#### IC<sub>50</sub> & Target

TLR4

## In Vivo

TLR4-IN-C34 (C34, 1 mg/kg, orally daily) could attenuate NEC severity and demonstrates a marked preservation of the intestinal mucosa<sup>[1]</sup>.

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

|                 |   |
|-----------------|---|
| Animal Model:   | Experimental NEC induced in 7-8 day old mice <sup>[1]</sup> . |
| Dosage:         | 1 mg/kg.  |
| Administration: | Orally every morning.   |
| Result:         | Attenuated intestinal inflammation.                           |

## CUSTOMER VALIDATION

- EMBO J. 2021 Apr 21;e106188.
- Cell Commun Signal. 2023 May 1;21(1):86.
- Front Pharmacol. 2022 Jul 22;13:920928.
- Eur J Pharmacol. 2022 Sep 21;175294.
- Sci Rep. 2023 Nov 9;13(1):19440.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

[1]. Neal MD, et al. Discovery and validation of a new class of small molecule Toll-like receptor 4 (TLR4) inhibitors. PLoS One. 2013 Jun 12;8(6):e65779.

[2]. Wipf P, et al. Synthesis of anti-inflammatory  $\alpha$ - and  $\beta$ -linked acetamidopyranosides as inhibitors of toll-like receptor 4 (TLR4). Tetrahedron Lett. 2015 Jun 3;56(23):3097-3100.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA