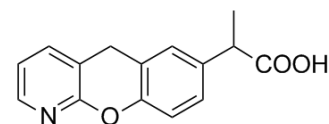


## Pranoprofen

|                    |   |       |          |
|--------------------|---|-------|----------|
| Cat. No.:          | HY-B0336  |       |          |
| CAS No.:           | 52549-17-4                                      |       |          |
| Molecular Formula: | C <sub>15</sub> H <sub>13</sub> NO <sub>3</sub> |       |          |
| Molecular Weight:  | 255.27  |       |          |
| Target:            | PGE synthase                                    |       |          |
| Pathway:           | Immunology/Inflammation                         |       |          |
| Storage:           | 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 (391.74 mM)

\* "≥" means soluble, but saturation unknown.

| Preparing Stock Solutions | Solvent Mass Concentration | 1 mg      | 5 mg       | 10 mg      |
|---------------------------|----------------------------|-----------|------------|------------|
|                           | 1 mM                       | 3.9174 mL | 19.5871 mL | 39.1742 mL |
| 5 mM                      | 0.7835 mL                  | 3.9174 mL | 7.8348 mL  |            |
| 10 mM                     | 0.3917 mL                  | 1.9587 mL | 3.9174 mL  |            |

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

#### In Vivo

- Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline**  
Solubility: ≥ 2.5 mg/mL (9.79 mM); Clear solution
- Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)**  
Solubility: ≥ 2.5 mg/mL (9.79 mM); Clear solution
- Add each solvent one by one: **10% DMSO >> 90% corn oil**  
Solubility: ≥ 2.5 mg/mL (9.79 mM); Clear solution

### BIOLOGICAL ACTIVITY

#### Description

Pranoprofen is a non-steroidal anti-inflammatory drug used in ophthalmology. Target: PGE<sub>2</sub>Pranoprofen 0.1% was found to be as effective as diclofenac sodium 0.1% in reducing inflammation and pain after strabismus surgery. Pranoprofen could be used as a safe and effective anti-inflammatory alternative for the treatment of inflammation following strabismus surgery [1]. pranoprofen has efficacy equivalent to a moderate-potency corticosteroid with a better safety profile. It should be considered for the treatment of chronic conjunctivitis of presumed nonbacterial

---

origin [2]. Pranoprofen inhibited ER stress-induced glucose regulated protein 78 (GRP78) expression, an ER-localized molecular chaperon. Moreover, pranoprofen inhibited ER stress-induced CCAAT/enhancer-binding protein homologous protein (CHOP) expression, an apoptotic transcription factor. the inhibitory effect of pranoprofen on ER stress-related genes (GRP78 and CHOP) would be mediated through the inhibition of XBP-1 splicing [3].

---

## REFERENCES

---

- [1]. Akyol-Salman, I., D. Lece-Serto, and O. Baykal, Topical pranoprofen 0.1% is as effective anti-inflammatory and analgesic agent as diclofenac sodium 0.1% after strabismus surgery. *J Ocul Pharmacol Ther*, 2007. 23(3): p. 280-3.
- [2]. Notivol, R., M. Martinez, and M.V. Bergamini, Treatment of chronic nonbacterial conjunctivitis with a cyclo-oxygenase inhibitor or a corticosteroid. Pranoprofen Study Group. *Am J Ophthalmol*, 1994. 117(5): p. 651-6.
- [3]. Hosoi, T., et al., Effect of pranoprofen on endoplasmic reticulum stress in the primary cultured glial cells. *Neurochem Int*, 2009. 54(1): p. 1-6.
- 

**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