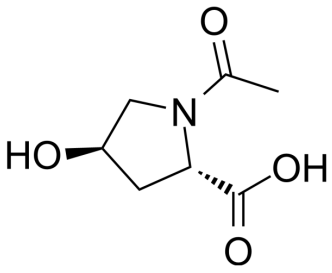
Oxaceprol

Cat. No.:	HY-17490
CAS No.:	33996-33-7
Molecular Formula:	$C_7H_{11}NO_4$
Molecular Weight:	173.17
Target:	Amino Acid Derivatives
Pathway:	Others
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 2 years -20°C 1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 100 mg/mL (577.47 mM)

* "≥" means soluble, but saturation unknown.

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	5.7747 mL	28.8734 mL	57.7467 mL
5 mM	1.1549 mL	5.7747 mL	11.5493 mL
10 mM	0.5775 mL	2.8873 mL	5.7747 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 (14.44 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (14.44 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Oxaceprol (N-Acetyl-L-hydroxyproline), an orally active derivative of L-proline, possesses distinct anti-inflammatory activity. Oxaceprol is usually used for the research of osteoarthritis and rheumatoid arthritis[1][2].

In Vivo

Oxaceprol, at 6 mg/kg/day for 7 days, significantly reduces both the surface area and wet weight of cotton pellet granulomas, being slightly less effective than indomethacin, 3 mg/kg[3].

Oxaceprol (6–54 mg/kg/day) given therapeutically had no effect on the primary paw oedema response, but inhibits secondary lesions in the ears and tail[3].

Oxaceprol does not inhibit the synthesis of prostaglandins in vitro, but markedly inhibits neutrophil infiltration into the joints of rats with adjuvant arthritis[4].

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

Animal Model:	Male Sprague-Dawley rats[3].
Dosage:	18, 50 or 150 mg/kg.
Administration:	Gavage daily for 15 days.
Result:	Produced comparable inhibition of hyperalgesia to that produced by indomethacin.

CUSTOMER VALIDATION

- Research Square Preprint. 2021 Aug.

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REFERENCES

[1]. Ionac M et al. Oxaceprol, an atypical inhibitor of inflammation and joint damage. Pharmacol Res, 1996 Jun, 33(6):367-73.

[2]. Harpreet Singh Pawar, et al. Comparative evaluation of therapeutic efficacy of intra-articular oxaceprol with conventional modalities in osteoarthritis animal model. Clin Rheumatol. 2018 Aug;37(8):2195-2201.

[3]. M Ionac, et al. Oxaceprol, an atypical inhibitor of inflammation and joint damage. Pharmacol Res. 1996 Jun;33(6):367-73.

[4]. M J Parnham, et al. Antirheumatic agents and leukocyte recruitment. New light on the mechanism of action of oxaceprol. Biochem Pharmacol. 1999 Jul 15;58(2):209-15.

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