
Product Data Sheet

Product Name: Rebamipide D4
 Cat. No.: GC61234

Chemical Properties

Cas. No. 1219409-06-9

SMILES OC(C(NC(C1=C([2H])C([2H])=C(Cl)C([2H])=C1[2H])=O)CC(C2=CC=CC=C2N3)=CC3=O)=O

Formula $C_{19}H_{11}D_4ClN_2O_4$ M.Wt 374.81

Solubility DMSO: soluble Storage Store at -20°C

General For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the tips ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Evaluation sample solution: ship with blue ice All other available size: ship with RT, or Condition blue ice upon request.

Structure

Background

Rebamipide-d₄ is intended for use as an internal standard for the quantification of rebamipide by GC- or LC-MS. Rebamipide is a gastroprotective agent and mucin secretagogue.^{1,2} It increases the levels of prostaglandin E₂ and COX-2 in rat gastric mucosa when administered at doses of 15 and 50 mg/kg per day. Rebamipide (30 and 100 mg/kg, i.p.) prevents the formation of gastric ulcers induced by absolute ethanol, sodium hydroxide, or hydrochloric acid in rats, an effect that can be blocked by the non-selective COX inhibitor indomethacin.³ It also increases the production of mucin 16 in stratified corneal epithelial cells *in vitro* when used at concentrations of 10 and 100 μM.² Rebamipide (1% w/v) increases the levels of mucin-like substances in rabbit conjunctiva and cornea and, in a rabbit model of dry eye disease, reduces desiccation-induced corneal damage.⁴ Formulations containing rebamipide have been used in the treatment of peptic ulcer disease and dry eye disease.

1. Sun, W.H., Tsuji, S., Gunawan, E.S., et al. Induction of cyclooxygenase-2 in rat gastric mucosa by rebamipide, a mucoprotective agent. *Pharmacol. Exp. Ther.* 295(2):447-452(2000)
 2. Uchino, Y., Woodward, A.M., and Argüeso, P. Differential effect of rebamipide on transmembrane mucin biosynthesis in stratified ocular surface epithelial cells. *Exp. Eye Res.* 153:1-7(2016)
 3. Yamasaki, K., Kanbe, T., Chijiwa, T., et al. Gastric mucosal protection by OPC-12759, a novel antiulcer compound, in the rat. *Eur. J. Pharmacol.* 142(1):23-29(1987)
 4. Urashima, H., Takeji, Y., Okamoto, T., et al. Rebamipide increases mucin-like substance contents and periodic acid Schiff reagent-positive cells density in normal rabbits. *J. Ocul. Pharmacol. Ther.* 28(3):264-270(2012)

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

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