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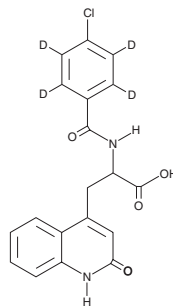
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PRODUCT INFORMATION



Rebamipide-d₄ Item No. 33543

CAS Registry No.: 1219409-06-9
Formal Name: 2-(4-chlorobenzamido-2,3,5,6-d₄)-3-(2-oxo-1,2-dihydroquinolin-4-yl)propanoic acid
MF: C₁₉H₁₁ClD₄N₂O₄
FW: 374.8
Chemical Purity: ≥98% (Rebamipide)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₄); ≤1% d₀
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Rebamipide-d₄ is intended for use as an internal standard for the quantification of rebamipide (Item No. 17186) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Rebamipide-d₄ is supplied as a solid. A stock solution may be made by dissolving the rebamipide-d₄ in the solvent of choice, which should be purged with an inert gas. Rebamipide-d₄ is soluble in the organic solvent DMSO.

Description

Rebamipide is a gastroprotective agent and mucin secretagogue.^{1,2} It increases the levels of prostaglandin E₂ (PGE₂; Item No. 14010) 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 (Item No. 70270).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.

References

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).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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