PRODUCT INFORMATION

Naloxegol-d_5 (oxalate)

Item No. 29578

Formal Name: (4R,4aS,7S,7aR,12bS)-7-((2,5,8,11,14,17,20-heptaoxadocosan-22-yl)oxy)-3-(allyl-d_5)-1,2,3,4,5,6,7,7a-octahydro-4aH-4,12-methanobenzofuro[3,2-e]isoquinoline-4a,9-diol, monoethanedioate

MF: $C_{34}H_{48}D_5NO_{11} \bullet C_2H_2O_4$

FW: 746.9

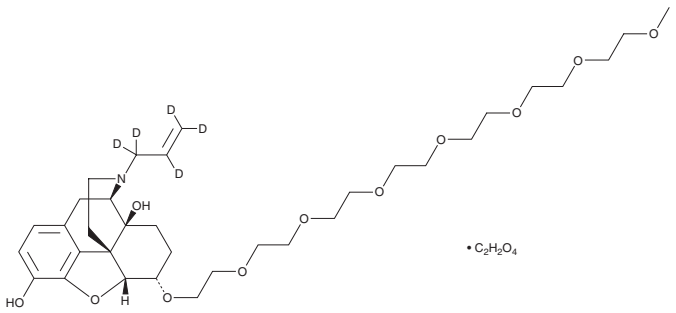
Chemical Purity: ≥98% (Naloxegol)

Deuterium Incorporation: ≥99% deuterated forms (d_1-d_5); ≤1% d_0

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years



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

Laboratory Procedures

Naloxegol-d_5 (oxalate) is intended for use as an internal standard for the quantification of naloxegol (Item No. 23731) 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).

Naloxegol-d_5 (oxalate) is supplied as a solid. A stock solution may be made by dissolving the naloxegol-d_5 (oxalate) in the solvent of choice, which should be purged with an inert gas. Naloxegol-d_5 (oxalate) is soluble in the organic solvent DMSO.

Description

Naloxegol is a peripherally acting antagonist of the μ-opioid receptor (K_i = 7.42 nM; pA_2 = 7.95).[1] It is selective for the μ-opioid receptor over the δ-opioid receptor (K_i = 866 nM). Naloxegol also acts as a partial agonist of κ-opioid receptors *in vitro* (EC_{50} = 47 nM for [^{35}S]GTPγS binding) but lacks activity *ex vivo* at concentrations up to 10 μM. *In vivo*, naloxegol reverses morphine-induced decreases in gastrointestinal motility and analgesia in a hot-plate assay in rats (ED_{50}s = 23.1 and 55.4 mg/kg, respectively), demonstrating a two-fold separation for peripheral *versus* CNS effects. Naloxegol also exhibits a brain uptake rate comparable to atenolol, a low-permeation standard with no brain uptake, in a rat brain perfusion model.

Reference

1. Floettmann, E., Bui, K., Sostek, M., *et al.* Pharmacologic profile of naloxegol, a peripherally acting μ-opioid receptor antagonist, for the treatment of opioid-induced constipation. *J. Pharmacol. Exp. Ther.* **361(2),** 280-291 (2017).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM