

PRODUCT INFORMATION



Ractopamine-d₃ (hydrochloride)

Item No. 37207

CAS Registry No.: 1219794-72-5
Formal Name: 4-hydroxy- α -[[[3-(4-hydroxyphenyl)-1-methylpropyl]amino]methyl-d₂]-benzenemethan-d-ol, monohydrochloride

Synonym: LY031537-d₃
MF: C₁₈H₂₀D₃NO₃ • HCl
FW: 340.9

Chemical Purity: ≥98% (Ractopamine)

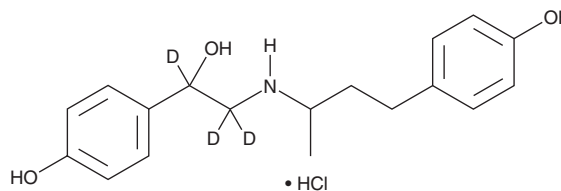
Deuterium

Incorporation: ≥99% deuterated forms (d₁-d₃); ≤1% d₀

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

Ractopamine-d₃ (hydrochloride) is intended for use as an internal standard for the quantification of ractopamine (Item No. 27613) 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).

Ractopamine-d₃ (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the ractopamine-d₃ (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Ractopamine-d₃ (hydrochloride) is soluble in DMSO (sonicated). Ractopamine-d₃ (hydrochloride) is also soluble in water (warmed).

Description

27613) by GC- or LC-MS. Ractopamine is a trace amine-associated receptor 1 (TAAR1) agonist.¹ It increases chloride conductance in *X. laevis* oocytes expressing the human cystic fibrosis transmembrane conductance regulator (CFTR) and mouse TAAR1 (EC₅₀ = 16 μ M), an effect that can be blocked by the TAAR1 antagonist EPPTB (Item No. 34330). It selectively induces chloride conductance in TAAR1- and CFTR-expressing oocytes over those expressing the human β_2 -adrenergic receptor (β_2 -AR) and CFTR at 36 μ M. However, it is also considered a β_2 -AR agonist that binds to β_2 -ARs (K_i = 0.18 μ M for the recombinant human receptor expressed in Sf9 cells) and induces relaxation of isolated guinea pig trachea with an EC₅₀ value of 9.1 nM.² Formulations containing ractopamine have been used as food additives in livestock to increase weight gain and leanness and improve feed efficiency.

References

1. Liu, X., Grandy, D.K., and Janowsky, A. Ractopamine, a livestock feed additive, is a full agonist at trace amine-associated receptor 1. *J. Pharmacol. Exp. Ther.* **350(1)**, 124-129 (2014).
2. Kern, C., Meyer, T., Droux, S., et al. Synthesis and pharmacological characterization of β_2 -adrenergic agonist enantiomers: Zilpaterol. *J. Med. Chem.* **52(6)**, 1773-1777 (2009).

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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