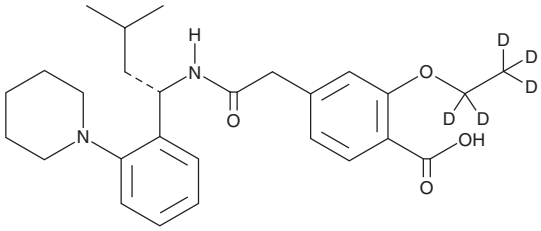
PRODUCT INFORMATION

Repaglinide-d_5

Item No. 26104

CAS Registry No.: 1217709-85-7
Formal Name: 2-(ethoxy-1,1,2,2,2-d_5)-4-[2-[[(1S)-3-methyl-1-[2-(1-piperidinyl)phenyl]butyl]amino]-2-oxoethyl]-benzoic acid
MF: $C_{27}H_{31}D_5N_2O_4$
FW: 457.6
Chemical Purity: ≥98% (Repaglinide)
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

Repaglinide-d_5 is intended for use as an internal standard for the quantification of repaglinide (Item No. 19387) 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).

Repaglinide-d_5 is supplied as a solid. A stock solution may be made by dissolving the repaglinide-d_5 in the solvent of choice, which should be purged with an inert gas. Repaglinide-d_5 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of repaglinide-d_5 in ethanol is approximately 25 mg/ml and appoximately 30 mg/ml in DMSO and DMF.

Description

Repaglinide is a metaglitinide antidiabetic agent that blocks ATP-dependent potassium ($K_{ir}6$) channels in pancreatic β-cells (K_d = 0.42 nM for the sulphonylurea receptor SUR1 when co-expressed with $K_{ir}6.2$).[1] *In vivo*, repaglinide lowers blood glucose in fasted rats and dogs (ED_{50}s = 10 and 28.3 µg/kg, respectively).[2] Formulations containing repaglinide have been used to control blood sugar levels in patients with type 2 diabetes.

References

1. Hansen, A.M.K., Hansen, J.B., Carr, R.D., *et al*. $K_{ir}6.2$-dependent high-affinity repaglinide binding to β-cell KATP channels. *Br. J. Pharmacol.* **144(4)**, 551-557 (2005).
2. Mark, M. and Grell, W. Hypoglycaemic effects of the novel antidiabetic agent repaglinide in rats and dogs. *Br. J. Pharmacol.* **121(8)**, 1597-1604 (1997).

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