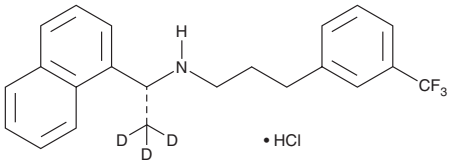
PRODUCT INFORMATION

Cinacalcet-d_3 (hydrochloride)

Item No. 25036

CAS Registry No.: 2749807-20-1
Formal Name: (αR)-α-(methyl-d_3)-N-[3-[3-(trifluoromethyl) phenyl]propyl]-1-naphthalenemethanamine, monohydrochloride
Synonym: AMG 073-d_3
MF: $C_{22}H_{19}D_3F_3N \bullet HCl$
FW: 396.9
Chemical Purity: ≥98% (Cinacalcet)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_3); ≤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

Cinacalcet-d_3 (hydrochloride) is intended for use as an internal standard for the quantification of cinacalcet (Item No. 16042) 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).

Cinacalcet-d_3 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the cinacalcet-d_3 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Cinacalcet-d_3 (hydrochloride) is soluble in organic solvents such as ethanol, methanol, DMSO, and dimethyl formamide.

Description

Cinacalcet is a calcimimetic and an allosteric agonist of the calcium-sensing receptor (CaSR; EC_{50} = 79.4 nM in HEK293T cells expressing the human receptor).[1] *In vivo*, cinacalcet (0.1-10 mg/kg, s.c.) decreases plasma levels of parathyroid hormone (PTH) in rats. It also decreases plasma levels of PTH and parathyroid cell proliferation in a mouse model of primary hyperparathyroidism.[2] Formulations containing cinacalcet have been used in the treatment of secondary hyperparathyroidism due to end-stage renal disease and hypercalcemia in patients with parathyroid carcinoma.

References

1. Ma, J.N., Owens, M., Gustafsson, M., *et al.* Characterization of highly efficacious allosteric agonists of the human calcium-sensing receptor. *J. Pharmacol. Exp. Ther.* **337(1)**, 275-284 (2011).
2. Imanishi, Y., Kawata, T., Kenko, T., *et al.* Cinacalcet HCl suppresses *Cyclin D1* oncogene-derived parathyroid cell proliferation in a murine model for primary hyperparathyroidism. *Calcif. Tissue Int.* **89(1)**, 29-35 (2011).

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