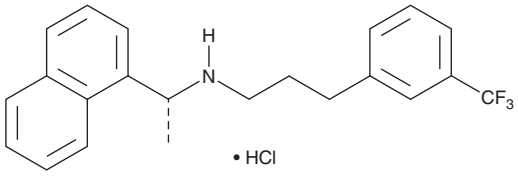
PRODUCT INFORMATION

Cinacalcet (hydrochloride)

Item No. 16042

CAS Registry No.: 364782-34-3
Formal Name: αR-methyl-N-[3-[3-(trifluoromethyl)phenyl]propyl]-1-naphthalenemethanamine, monohydrochloride
Synonyms: AMG 073, KRN 1493, Mimpara
MF: $C_{22}H_{22}F_3N \bullet HCl$
FW: 393.9
Purity: ≥95%
UV/Vis.: λ_{max}: 223, 282 nm
Supplied as: A crystalline 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 (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the cinacalcet (hydrochloride) in the solvent of choice. Cinacalcet (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of cinacalcet (hydrochloride) in these solvents is approximately 30 mg/ml.

Cinacalcet (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, cinacalcet (hydrochloride) should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Cinacalcet (hydrochloride) has a solubility of approximately 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

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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