

## Product Data Sheet

Product Name: Cinacalcet HCl

Cat. No.: GC16708

### Chemical Properties

Cas. No. 364782-34-3

Chemical Name N-[(1R)-1-naphthalen-1-ylethyl]-3-[3-(trifluoromethyl)phenyl]propan-1-amine;hydrochloride

SMILES CC(C1=CC=CC2=CC=CC=C21)NCCCC3=CC(=CC=C3)C(F)(F)F.Cl

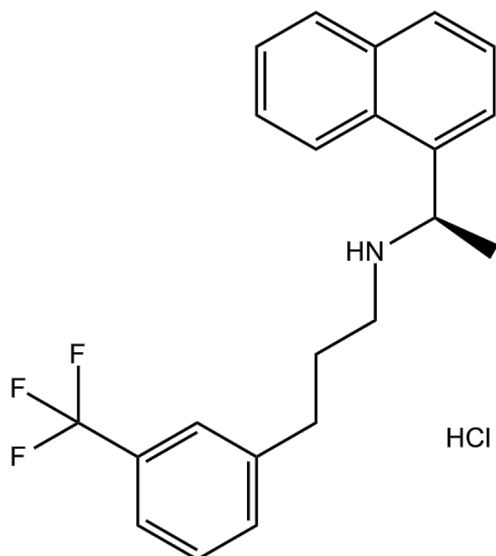
Formula C<sub>22</sub>H<sub>23</sub>ClF<sub>3</sub>N M.Wt 393.87

Solubility ≥ 17.85mg/mL in DMSO Storage Store at -20°C

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure



### Protocol

**Caution: Product has not been fully validated for medical applications. For research use only.**

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**Animal  
experiment:**

To identify apoptosis in parathyroid glands from 5/6 nephrectomized or sham rats treated with vehicle [phosphate-buffered saline (PBS)] or Cinacalcet (10 mg/kg), nuclear DNA fragmentation is measured in situ using the Apoptag System. Briefly, parathyroid gland sections from animals treated with vehicle or cinacalcet HCl are digested with 20 µg/mL proteinase K in 0.1 mol/L PBS at room temperature for 15 minutes and incubated with 3% hydrogen peroxide/methanol for 5 minutes to block endogenous peroxidase. Sections are incubated for 1 hour at 37°C with terminal deoxynucleotidyl transferase (TdT) to label exposed 3'-OH DNA ends with digoxigenin-tagged nucleotides. Digoxigenin-labeled DNA is detected by the immunoperoxidase method. Sections are developed with 3,3'-diaminobenzidine (DAB), and the nuclei of apoptotic cells are stained brown. The specificity for apoptosis is verified by negative staining when distilled water is substituted for TdT.

References:

- [1]. Colloton M, et al. Cinacalcet HCl attenuates parathyroid hyperplasia in a rat model of secondary hyperparathyroidism. *Kidney Int.* 2005 Feb;67(2):467-76.
- [2]. D.A. Bushinsky, et al. Effect of cinacalcet on urine calcium excretion and supersaturation in genetic hypercalciuric stone-forming rats. *Kidney Int.* 2006 May;69(9):1586-92.

### Background

Cinacalcet HCl (AMG 073), the second-generation calcimimetic, is a potent agonist of calcium-sensing receptor (CaR) with an EC50 value of 2.8 µm [1].

Cinacalcet HCl showed to be safe for the secondary hyperparathyroidism treatment. Besides, cinacalcet HCl has been proved to reduce parathyroid hormone (PTH) levels significantly while reducing the calcium x phosphorus product and serum phosphorus levels at the same time [1].

Administered orally with cinacalcet in Rice H-500 tumor bearing mice has shown a significant reduction of blood ionized calcium, serum total calcium concentrations and serum PTHrP levels [2].

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### References:

- [1] Ureña P1, Frazão JM. Calcimimetic agents: review and perspectives. *Kidney Int Suppl.* 2003 Jun; (85):S91-6.
- [2] Colloton M1, Shatzen E, Wiemann B, Starnes C, Scully S, Henley C, Martin D. Cinacalcet attenuates hypercalcemia observed in mice bearing either Rice H-500 Leydig cell or C26-DCT colon tumors. *Eur J Pharmacol.* 2013 Jul 15;712(1-3):8-15.

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