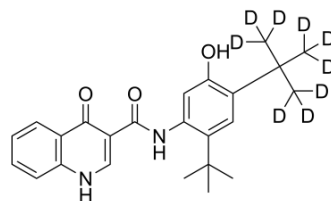


Ivacaftor-D9

| | |
|---------------------------|---|
| Cat. No.: | HY-13017S |
| CAS No.: | 1413431-07-8 |
| Molecular Formula: | C ₂₄ H ₁₉ D ₉ N ₂ O ₃ |
| Molecular Weight: | 401.55 |
| Target: | CFTR |
| Pathway: | Membrane Transporter/Ion Channel |
| Storage: | Please store the product under the recommended conditions in the Certificate of Analysis. |



BIOLOGICAL ACTIVITY

| | |
|--------------------|--|
| Description | Ivacaftor-D9 (CTP-656) is a potent CFTR modulator and exhibits an EC ₅₀ value of 255 nM for CFTR potentiation in G551D/F508del HBE Cells. Ivacaftor-D9 acts as an orally active and improved deuterated Ivacaftor analog for cystic fibrosis research ^[1] . |
| In Vivo | In PK study, CTP-656 (oral gavage; 10 mg/kg; single dose) shows a superior pharmacokinetic profile, The plasma levels of compound were measured over 72 hours, exhibits the parameters C _{max} , AUC _{0-24 hr} , C _{24hr} and t _{1/2} of 1970 ng/ml (15%), 24,260 hr*ng/ml(17%), 413 ng/ml (19%) and 13.9 hours, respectively in Male Sprague-Dawley rats. CTP-656 (oral gavage; 3 mg/kg; single dose) exhibits the parameters C _{max} , AUC _{0-24 hr} , C _{24hr} and t _{1/2} of 3643 ng/ml (9%), 49,782 hr*ng/ml(31%), 1418 ng/ml (31%) and 22.8 hours, respectively in Male Beagle Dogs (3.0 mg/kg). MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

REFERENCES

[1]. Scott L Harbeson, et al. Altering Metabolic Profiles of Drugs by Precision Deuteration 2: Discovery of a Deuterated Analog of Ivacaftor with Differentiated Pharmacokinetics for Clinical Development. J Pharmacol Exp Ther. 2017 Aug;362(2):359-367.

[2]. Scott L Harbeson, et al. Altering Metabolic Profiles of Drugs by Precision Deuteration 2: Discovery of a Deuterated Analog of Ivacaftor with Differentiated Pharmacokinetics for Clinical Development. J Pharmacol Exp Ther. 2017 Aug;362(2):359-367.

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

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA