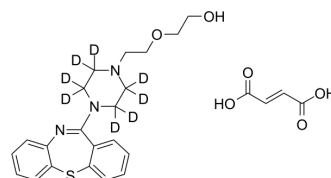


Quetiapine-d8 fumarate

Cat. No.:	HY-B0031S2
CAS No.:	1185247-12-4
Molecular Formula:	C ₂₅ H ₂₁ D ₈ N ₃ O ₆ S
Molecular Weight:	507.63
Target:	5-HT Receptor; Dopamine Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	<p>Quetiapine-d8 fumarate is the deuterium labeled Quetiapine. Quetiapine is a 5-HT receptors agonist with a pEC₅₀ of 4.77 for human 5-HT_{1A} receptor. Quetiapine is a dopamine receptor antagonist with a pIC₅₀ of 6.33 for human D₂ receptor. Quetiapine has moderate to high affinity for the human D₂, HT_{1A}, 5-HT_{2A}, 5-HT_{2C} receptor with pK_is of 7.25, 5.74, 7.54, 5.55. Antidepressant and anxiolytic effects^{[1][2]}.</p>
In Vitro	<p>Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs^[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216.
- [2]. Cross AJ, et al. Quetiapine and its metabolite norquetiapine: translation from in vitro pharmacology to in vivo efficacy in rodent models. *Br J Pharmacol.* 2016 Jan;173(1):155-66.
- [3]. Hanzhi Wang, et al. Quetiapine Inhibits Microglial Activation by Neutralizing Abnormal STIM1-Mediated Intercellular Calcium Homeostasis and Promotes Myelin Repair in a Cuprizone-Induced Mouse Model of Demyelination. *Front Cell Neurosci.* 2015 Dec 21;9:492.

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

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