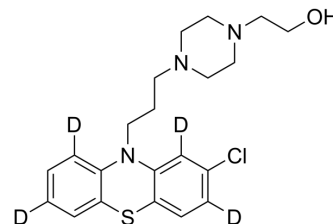


Perphenazine-d₄

| | | | |
|---------------------------|---|-------|----------|
| Cat. No.: | HY-A0077S1 | | |
| CAS No.: | 155593-75-2 | | |
| Molecular Formula: | C ₂₁ H ₂₂ D ₄ ClN ₃ OS | | |
| Molecular Weight: | 407.99 | | |
| Target: | 5-HT Receptor; Adrenergic Receptor; Apoptosis; Autophagy; Dopamine Receptor; Histamine Receptor | | |
| Pathway: | GPCR/G Protein; Neuronal Signaling; Apoptosis; Autophagy; Immunology/Inflammation | | |
| Storage: | Powder | -20°C | 3 years |
| | | 4°C | 2 years |
| | In solvent | -80°C | 6 months |
| | | -20°C | 1 month |



BIOLOGICAL ACTIVITY

| | |
|--------------------|--|
| Description | Perphenazine-d ₄ is the deuterium labeled Perphenazine. Perphenazine is a typical antipsychotic agent, inhibits 5-HT _{2A} receptor, Alpha-1A adrenergic receptor, Dopamine receptor D ₂ /D ₃ , D _{2L} receptor, and Histamine H ₁ receptor, with K _i values of 5.6, 10, 0.765/0.13, 3.4, and 8 nM, respectively. |
| In Vitro | 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. |

REFERENCES

- [1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019;53(2):211-216. ; Richtand NM, et al. Dopamine and serotonin receptor binding and antipsychotic efficacy. *Neuropsychopharmacology.* 2007 Aug;32(8):1715-26.
- [2]. Richtand NM, et al. Dopamine and serotonin receptor binding and antipsychotic efficacy. *Neuropsychopharmacology.* 2007 Aug;32(8):1715-26.
- [3]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother.* 2019 Feb;53(2):211-216.

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

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