

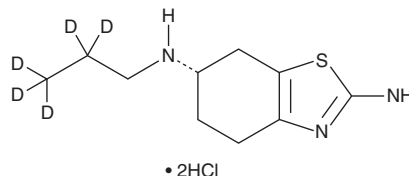
PRODUCT INFORMATION



(S)-Pramipexole-d₅ (hydrochloride)

Item No. 31239

CAS Registry No.: 1217601-58-5
Formal Name: (S)-N⁶-(propyl-2,2,3,3,3-d₅)-4,5,6,7-tetrahydrobenzo[d]thiazole-2,6-diamine, dihydrochloride
Synonyms: (-)-Pramipexole-d₅, Pramipexole-d₅, SND 19-d₅
MF: C₁₀H₁₂D₅N₃S • 2HCl
FW: 289.3
Chemical Purity: ≥98% ((S)-POramipexole)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₅); ≤1% d₀
Supplied as: A 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

(S)-Pramipexole-d₅ (hydrochloride) is intended for use as an internal standard for the quantification of (S)-pramipexole (Item No. 11981) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

(S)-Pramipexole-d₅ (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the (S)-pramipexole-d₅ (hydrochloride) in the solvent of choice, which should be purged with an inert gas. (S)-Pramipexole-d₅ (hydrochloride) is slightly soluble in methanol.

Description

(S)-Pramipexole is a dopamine D_{2S}, D_{2L}, D₃, and D₄ receptor agonist (EC₅₀s = 426.58, 338.84, 2.24, and 128.82 nM, respectively, in a [³⁵S]GTPγS binding assay).¹ It is also a partial agonist of α_{2A}-adrenergic receptors (α_{2A}-ARs; EC₅₀ = 3,548.13 nM). (S)-Pramipexole is selective for dopamine D₂₋₄ receptors (K_is = 954.99, 1,698.24, 12.59, 128.82 nM for D_{2S}, D_{2L}, D₃, and D₄ receptors, respectively, in a radioligand binding assay) over D₁ and D₅ receptors (K_is = >10,000 nM for both).² It prevents MPTP-induced decreases in the number of dopaminergic neurons in the substantia nigra pars compacta in common marmosets when administered at a dose of 60 μg/kg per day before, during, and after administration of MPTP.³ Formulations containing (S)-pramipexole have been used in the treatment of Parkinson's disease and restless legs syndrome.

References

1. Newman-Tancredi, A., Cussac, D., Audinot, V., et al. Differential actions of antiparkinson agents at multiple classes of monoaminergic receptor. II. Agonist and antagonist properties at subtypes of dopamine D₂-like receptor and α₁/α₂-adrenoceptor. *J. Pharmacol. Exp. Ther.* **303**(2), 805-814 (2002).
2. Millan, M.J., Maiofiss, L., Cussac, D., et al. Differential actions of antiparkinson agents at multiple classes of monoaminergic receptor. I. A multivariate analysis of the binding profiles of 14 drugs at 21 native and cloned human receptor subtypes. *J. Pharmacol. Exp. Ther.* **303**(2), 791-804 (2002).
3. Iravani, M.M., Haddon, C.O., Cooper, J.M., et al. Pramipexole protects against MPTP toxicity in non-human primates. *J. Neurochem.* **96**(5), 1315-1321 (2006).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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