

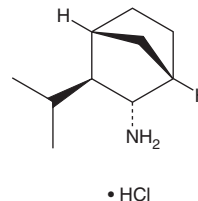
# PRODUCT INFORMATION



## BRD4780 (hydrochloride)

Item No. 43542

**CAS Registry No.:** 1021868-90-5  
**Formal Name:** (1R,2R,3R,4S)-*rel*-3-(1-methylethyl)-bicyclo[2.2.1]heptan-2-amine, monohydrochloride  
**Synonym:** AGN 192403  
**MF:** C<sub>10</sub>H<sub>19</sub>N • HCl  
**FW:** 189.7  
**Purity:** ≥95%  
**Supplied as:** 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

BRD4780 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the BRD4780 (hydrochloride) in the solvent of choice, which should be purged with an inert gas. BRD4780 (hydrochloride) is soluble (≥10 mg/ml) in ethanol and DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of BRD4780 (hydrochloride) can be prepared by directly dissolving the solid in aqueous buffers. BRD4780 (hydrochloride) is soluble (≥10 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

### Description

BRD4780 is an antagonist of the imidazoline I<sub>1</sub> receptor (K<sub>i</sub> = 42 nM).<sup>1</sup> It is selective for the imidazoline I<sub>1</sub> receptor over α<sub>1</sub>-, α<sub>2A</sub>-, α<sub>2B</sub>-, and α<sub>2C</sub>-adrenergic receptors (K<sub>i</sub>s = >100, >20, >20, and >20 μM, respectively). BRD4780 also binds to transmembrane P24 trafficking protein 9 (TMED9) in a thermal shift assay and releases mucin 1-fs (MUC1-fs), a mutant form of MUC1 caused by a frameshift mutation in MUC1, from TMED9-containing vesicles in kidney cells isolated from patients with MUC1 kidney disease.<sup>2</sup> *In vivo*, BRD4780 (1, 10, and 50 mg/kg) reduces renal MUC1-fs accumulation in transgenic mice heterozygous for human MUC1-fs.

### References

1. Munk, S.A., Lai, R.K., Burke, J.E., *et al.* Synthesis and pharmacologic evaluation of 2-endo-amino-3-exo-isopropylbicyclo[2.2.1]heptane: a potent imidazoline<sub>1</sub> receptor specific agent. *J. Med. Chem.* **39**(6), 1193-1195 (1996).
2. Dvela-Levitt, M., Kost-Alimova, M., Emani, M., *et al.* Small molecule targets TMED9 and promotes lysosomal degradation to reverse proteinopathy. *Cell* **178**(3), 521-535 (2019).

#### 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.

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