

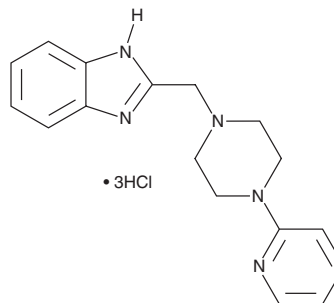
# PRODUCT INFORMATION



## ABT-724 (hydrochloride)

Item No. 29506

**CAS Registry No.:** 587870-77-7  
**Formal Name:** 2-[[4-(2-pyridinyl)-1-piperazinyl]methyl]-1H-benzimidazole, trihydrochloride  
**MF:** C<sub>17</sub>H<sub>19</sub>N<sub>5</sub> • 3HCl  
**FW:** 402.8  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 245, 270, 276, 317 nm  
**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

ABT-724 (hydrochloride) is supplied as a solid. A stock solution may be made by dissolving the ABT-724 (hydrochloride) in water. We do not recommend storing the aqueous solution for more than one day.

### Description

ABT-724 is a dopamine D<sub>4</sub> receptor agonist with an EC<sub>50</sub> value of 12.4 nM in a FLIPR calcium flux assay using HEK293 cells expressing the human D<sub>4.4</sub> receptor and Gα<sub>qo5</sub>.<sup>1</sup> It is selective for dopamine D<sub>4</sub> over D<sub>2</sub> receptors at 10 μM. ABT-724 (0.03 μmol/kg) induces penile erections in 77% of male rats. It decreases mounting frequency and ejaculation latency and increases ejaculation frequency and copulatory efficacy in male rats when administered at a dose of 0.04 mg/kg.<sup>2</sup> ABT-724 (0.16 and 0.64 mg/kg) decreases hyperactivity and exploratory behavior in the open field test in an adolescent spontaneously hypertensive rat (SHR) model of attention-deficit hyperactivity disorder (ADHD).<sup>3</sup>

### References

1. Cowart, M., Latshaw, S.P., Bhatia, P., *et al.* Discovery of 2-(4-pyridin-2-ylpiperazin-1-ylmethyl)-1H-benzimidazole (ABT-724), a dopaminergic agent with a novel mode of action for the potential treatment of erectile dysfunction. *J. Med. Chem.* **47(15)**, 3853-3864 (2004).
2. Sanna, F., Contini, A., Melis, M.R., *et al.* Role of dopamine D<sub>4</sub> receptors in copulatory behavior: Studies with selective D<sub>4</sub> agonists and antagonists in male rats. *Pharmacol. Biochem. Behav.* **137**, 110-118 (2015).
3. Yin, P., Cao, A.-H., Yu, L., *et al.* ABT-724 alleviated hyperactivity and spatial learning impairment in the spontaneously hypertensive rat model of attention-deficit/hyperactivity disorder. *Neurosci. Lett.* **580**, 142-146 (2014).

#### 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

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