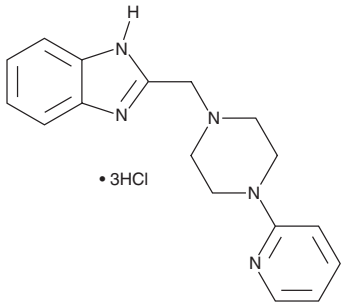
PRODUCT INFORMATION

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:	$C_{17}H_{19}N_5 \bullet 3HCl$
FW:	402.8
Purity:	≥98%
UV/Vis.:	λ_{max}: 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_4 receptor agonist with an EC_{50} value of 12.4 nM in a FLIPR calcium flux assay using HEK293 cells expressing the human $D_{4.4}$ receptor and $G\alpha_{qo5}$.[1] It is selective for dopamine D_4 over D_2 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.[2] 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).[3]

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_4 receptors in copulatory behavior: Studies with selective D_4 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).

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