

Product Name: ABT 724 trihydrochloride

Catalog No.: 2214

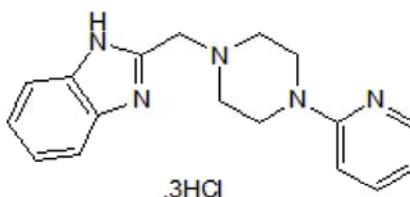
Batch No.: 1

CAS Number: 587870-77-7

IUPAC Name: 2-[[4-(2-Pyridinyl)-1-piperazinyl]methyl]-1*H*-benzimidazole trihydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₇H₁₉N₅.3HCl
Batch Molecular Weight: 402.75
Physical Appearance: White solid
Solubility: water to 100 mM
Storage: Desiccate at +4°C
Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.5 (Dichloromethane:Methanol [20:1])
Melting Point: Between 231 - 235°C
HPLC: Shows >99.5% purity
¹H NMR: Consistent with structure
Mass Spectrum: Consistent with structure
Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	50.7	5.51	17.39
Found	50.5	5.46	17.02

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

ABT 724 is a potent dopamine D₄ receptor partial agonist (EC₅₀ = 12.4 nM; 61% efficacy vs. dopamine), which displays no agonist activity at D₂ receptors (EC₅₀ > 10 μM). ABT 724 is selective in rats in vivo and produces penile erection following i.c.v. administration, and increases intracavernosal pressure and potentiates the proerectile effects of sildenafil following s.c. administration. This compound displays minimal side effects.

Physical and Chemical Properties:

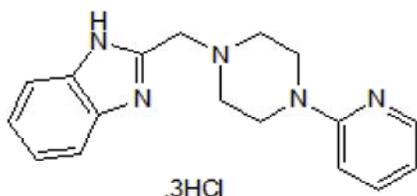
Batch Molecular Formula: C₁₇H₁₉N₅.3HCl

Batch Molecular Weight: 402.75

Physical Appearance: White solid

Minimum Purity: ≥99%

Batch Molecular Structure:



Storage: Desiccate at +4°C

Solubility & Usage Info:

water to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Brioni et al (2004) Activation of DA D₄ receptors by ABT-724 induces penile erection in rats. *Proc.Natl.Acad.Sci.USA* **101** 6758.

Cowart et al (2004) Discovery of 2-(4-pyridin-2-ylpiperazin-1-ylmethyl)-1*H*-benzimidazole (ABT-724), a D₄ agent with a novel mode of action for the potential treatment of erectile dysfunction. *J.Med.Chem.* **47** 3853. PMID: 15239663.

Stewart et al (2004) DA D₄ ligands and models of receptor activation: 2-(4-pyridin-2-ylpiperazin-1-ylmethyl)-1*H*-benzimidazole and related heteroarylmethylarylpiperazines exhibit a substituent effect responsible for additional efficacy tuning. *J.Med.Chem.* **47** 2348. PMID: 15084133.

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