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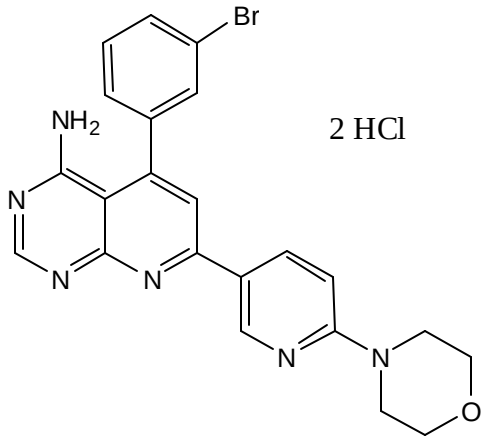
ProductInformation

ABT-702

Product Number **A 2721**
Storage Temperature RT

Synonym: 4-Amino-5-(3-bromophenyl)-7-(6-morpholino-pyridin-3-yl)pyrido[2,3-*d*]pyrimidine dihydrochloride



Product Description
Molecular Formula: $C_{22}H_{19}BrN_6O \bullet 2HCl$
Molecular Weight: 536.3 (anhydrous)

Supplied as orange solid
Purity: 99% by HPLC
Melting Point: 227-245 °C

ABT-702 is a potent non-nucleoside inhibitor of adenosine kinase (AK), a primary enzyme in the metabolic pathway of adenosine that phosphorylates adenosine at the 5′ position. ABT-702 is several orders of magnitude more selective for AK over other sites of adenosine action, such as A_1, A_{2A} and A_3 adenosine receptors, adenosine deaminase and the adenosine transporter. It is essentially equipotent (IC_{50} = 1.5 nM) in inhibiting native human placental AK, human recombinant AK isoforms (AK_{long} and AK_{short}), and AK from monkey, dog, rat and mouse brain.[1]

AK is an important intracellular enzyme that is responsible for regulating the intra- and extracellular concentrations of adenosine. Adenosine is an endogenous neuromodulator that possesses both antinociceptive and anti-inflammatory activity. Thus, it may protect cells during conditions of physiological stress or trauma, including ischemia, seizures, inflammation, and pain.[1]

AK inhibition potentiates local tissue concentrations of endogenous adenosine. Therefore, AK inhibitors may possess therapeutic potential as analgesic and anti-inflammatory agents.[2]

In several pain models in rat, ABT-702 is orally active and fully effective in suppressing nociception. The data further indicate that ABT-702 is especially potent in a model of inflammatory thermal hyperalgesia (ED_{50} = 5 µmol/kg orally) and in an edema model of acute inflammation.[3,4]

Preparation Instructions
ABT 702 is soluble in DMSO at 24 mg/ml. It is insoluble in water.

Storage/Stability
Store tightly sealed and desiccated at room temperature.

References
1. Jarvis, M.F., et al., J. Pharmacol. Exp. Ther., **295**, 1156-1164 (2000).
2. Kowaluk, E.A. and Jarvis, M.F., Expert Opin. Investig. Drugs, **9**, 551-554 (2000).
3. Kowaluk, E.A., et al., J. Pharmacol. Exp. Ther., **295**, 1165-1174 (2000).
4. Suzuki, R., et al., Br. J. Pharmacol., **132**, 1615-1623 (2001).

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