Zaprinast
Item No. 10010421

CAS Registry No.: 37762-06-4
Formal Name: 3,6-dihydro-5-(2-propoxyphenyl)-7H-1,2,3-triazolo[4,5-d]pyrimidin-7-one
Synonyms: 2-(o-Propoxyphenyl)-8-azapurin-6-one, M&B 22,948
MF: C_{13}H_{13}N_{5}O_{2}
FW: 271.3
Purity: ≥98%
Stability: ≥1 year at -20°C
Supplied as: A crystalline solid

Laboratory Procedures
For long term storage, we suggest that zaprinast be stored as supplied at -20°C. It should be stable for at least one year.

Zaprinast is supplied as a crystalline solid. A stock solution may be made by dissolving the zaprinast in an organic solvent purged with an inert gas. Zaprinast is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of zaprinast in these solvents is approximately 10 mg/ml.

Zaprinast is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, zaprinast should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Zaprinast has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMF/PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

The cyclic nucleotide second messenger guanosine 3'5'-cyclic monophosphate (cGMP) is an important mediator of signal transduction and hence a wide range of cellular processes. It can be generated by soluble guanylyl cyclase in response to binding of nitric oxide and degraded via members of the phosphodiesterase (PDE) protein family. Zaprinast, the compound from which sildenafil (Viagra™) was developed, is a cGMP-specific phosphodiesterase inhibitor. It moderately inhibits PDE5 and PDE6 with IC_{50} values of 0.5-0.76 and 0.15 µM, respectively, and weakly inhibits PDE9, PDE10, and PDE11 with IC_{50} values of 35, 22, and 11-33 µM, respectively.1,2 Zaprinast therefore enhances the vasodilatory effects of nitric oxide in a range of vascular tissues by prolonging the cGMP-mediated activation of cGMP-dependent protein kinase.2 Zaprinast also activates both the rat and human G protein-coupled receptor, GPR35 with EC_{50} values of 16 nM and 0.84 µM, respectively.3

References

Related Products
For a list of related products please visit: www.caymanchem.com/catalog/10010421

WARNING: This product is for laboratory research only; not for administration to humans. Not for human or veterinary diagnostic or therapeutic use.

MATERIAL SAFETY DATA
This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent via email to your institution.

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