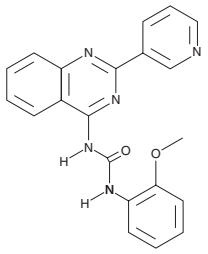
PRODUCT INFORMATION

VUF 5574

Item No. 27676

CAS Registry No.: 280570-45-8
Formal Name: N-(2-methoxyphenyl)-N'-[2-(3-pyridinyl)-4-quinazolinyl]-urea
MF: $C_{21}H_{17}N_5O_2$
FW: 371.4
Purity: ≥98%
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

VUF 5574 is supplied as a solid. A stock solution may be made by dissolving the VUF 5574 in the solvent of choice, which should be purged with an inert gas. VUF 5574 is soluble in the organic solvent DMSO at a concentration of approximately 4 mM.

Description

VUF 5574 is an antagonist of the adenosine A_3 receptor (K_i = 4.03 nM for the recombinant human receptor).[1] It is greater than 2,500-fold selective for adenosine A_3 over A_1 and A_{2A} receptors. VUF 5574 (100 nM) decreases phosphorylation of ERK1/2 induced by adenosine (Item No. 21232) in isolated porcine coronary artery smooth muscle cells.[2] It increases oxygen-glucose deprivation-induced reductions in the amplitude of field excitatory postsynaptic potentials (EPSPs) in a rat hippocampal slice model of ischemia when used at a concentration of 100 nM.[3] VUF 5574 (2 µg, intracisternal) reduces sodium nitroprusside-induced heart rate increases in rats.[4]

References

1. van Muijwijk-Koezen, J.E., Timmerman, H., van der Goot, H., *et al.* Isoquinoline and quinazoline urea analogues as antagonists for the human adenosine A_3 receptor. *J. Med. Chem.* **43(11)**, 2227-2238 (2000).
2. Shen, J., Halenda, S.P., Sturek, M., *et al.* Cell-signaling evidence for adenosine stimulation of coronary smooth muscle proliferation via the A_1 adenosine receptor. *Circ. Res.* **97(6)**, 574-582 (2005).
3. Pugliese, A.M., Coppi, E., Spalluto, G., *et al.* A_3 adenosine receptor antagonists delay irreversible synaptic failure caused by oxygen and glucose deprivation in the rat CA1 hippocampus *in vitro*. *Br. J. Pharmacol.* **147(5)**, 524-532 (2006).
4. El-Mas, M.M., El-Gowilly, S.M., Fouda, M.A., *et al.* Role of adenosine A_{2A} receptor signaling in the nicotine-evoked attenuation of reflex cardiac sympathetic control. *Toxicol. Appl. Pharmacol.* **254(3)**, 229-237 (2011).

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