

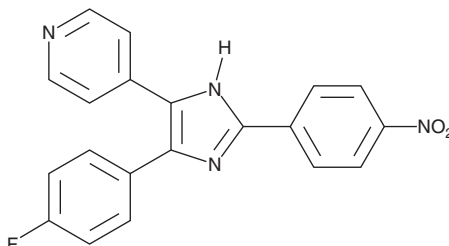
PRODUCT INFORMATION



PD 169316

Item No. 10006727

CAS Registry No.: 152121-53-4
Formal Name: 4-[5-(4-fluorophenyl)-2-(4-nitrophenyl)-1H-imidazol-4-yl]-pyridine
MF: C₂₀H₁₃FN₄O₂
FW: 360.3
Purity: ≥98%
UV/Vis.: λ_{max}: 229, 365 nm
Supplied as: A crystalline 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

PD 169316 is supplied as a crystalline solid. A stock solution may be made by dissolving the PD 169316 in the solvent of choice, which should be purged with an inert gas. PD 169316 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of PD 169316 in these solvents is approximately 2 mg/ml.

PD 169316 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, PD 169316 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. PD 169316 has a solubility of approximately 0.25 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

p38 is a member of the mitogen-activated protein kinase (MAPK) superfamily of enzymes that play an important role in signal transduction. PD 169316 is a selective inhibitor of p38 MAPK.¹ It inhibits p38 MAPK with an IC₅₀ of 89 nM, whereas the IC₅₀s are >100-fold higher for extracellular signal-regulated kinase (ERK) and >1,000-fold higher for protein kinase A (PKA) and PKCα.¹ PD 169316 inhibits apoptosis of neuronal and non-neuronal cells deprived of specific trophic factors such as potassium or nerve growth factor.^{2,3}

References

1. Gallagher, T.F., Seibel, G.L., Kassis, S., *et al.* Regulation of stress-induced cytokine production by pyridinylimidazoles; Inhibition of CSBP kinase. *Bioorg. Med. Chem.* **5(1)**, 49-64 (1997).
2. Nath, R., McGinnis, K., Dutta, S., *et al.* Inhibition of p38 kinase mimics survival signal-linked protection against apoptosis in rat cerebellar granule neurons. *Cellular and Molecular Biology Letters* **6**, 173-184 (2001).
3. Kummer, J.L., Rao, P.K., and Heidenreich, K.A. Apoptosis induced by withdrawal of trophic factors is mediated by p38 mitogen-activated protein kinase. *J. Biol. Chem.* **272(33)**, 20490-20494 (1997).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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