

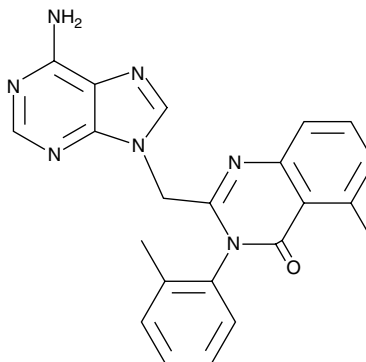
Product Information



IC-87114

Item No. 11589

CAS Registry No.: 371242-69-2
Formal Name: 2-[(6-amino-9H-purin-9-yl)methyl]-5-methyl-3-(2-methylphenyl)-4(3H)-quinazolinone
MF: C₂₂H₁₉N₇O
FW: 397.4
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 229, 262, 310 nm



Laboratory Procedures

For long term storage, we suggest that IC-87114 be stored as supplied at -20°C. It should be stable for at least two years. IC-87114 is supplied as a crystalline solid. A stock solution may be made by dissolving the IC-87114 in the solvent of choice. IC-87114 is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of IC-87114 in these solvents is approximately 30 mg/ml.

IC-87114 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, IC-87114 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. IC-87114 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

The phosphatidylinositol-3-kinase (PI3K) signaling pathway has central roles in cell growth, development, and survival.^{1,2} IC-87114 is a cell-permeable selective inhibitor of the PI3K catalytic subunit p110δ (IC₅₀ = 0.5 μM).³ It less effectively inhibits p110γ and p110β (IC₅₀ = 29 and 75 μM, respectively) and has no significant effect on p110α and several other kinases.^{3,4} This product is used to elucidate the role of p110δ in cells, including neutrophils, natural killer cells, and other types of leukocytes.³⁻⁷ It has also been used in mice.⁸

References

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6. Niedermeier, M., Hennessy, B.T., Knight, Z.A., *et al.* Isoform-selective phosphoinositide 3'-kinase inhibitors inhibit CXCR4 signaling and overcome stromal cell-mediated drug resistance in chronic lymphocytic leukemia: A novel therapeutic approach. *Blood* **113**(22), 5549-5557 (2009).
7. Sujobert, P., Bardet, V., Cornillet-Lefebvre, P., *et al.* Essential role for the p110δ isoform in phosphoinositide 3-kinase activation and cell proliferation in acute myeloid leukemia. *Blood* **106**(3), 1063-1066 (2005).
8. Lee, K.S., Lee, H.K., Hayflick, J.S., *et al.* Inhibition of phosphoinositide 3-kinase δ attenuates allergic airway inflammation and hyperresponsiveness in murine asthma model. *FASEB J.* **20**(3), 455-465 (2006).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/11589

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

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 Safety Data Sheet, which has been sent via email to your institution.

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