

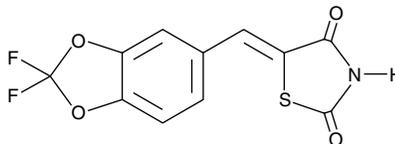
Product Information



AS-604850

Item No. 10010175

CAS Registry No.: 648449-76-7
Formal Name: 5-[(2,2-difluoro-1,3-benzodioxol-5-yl)methylene]-2,4-thiazolidinedione
MF: C₁₁H₅F₂NO₄S
FW: 285.2
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 231, 328 nm



Laboratory Procedures

For long term storage, we suggest that AS-604850 be stored as supplied at -20°C. It should be stable for at least two years.

AS-604850 is supplied as a crystalline solid. A stock solution may be made by dissolving the AS-604850 in an organic solvent purged with an inert gas. AS-604850 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of AS-604850 in these solvents is approximately 5, 30, and 20 mg/ml, respectively.

AS-604850 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, AS-604850 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. AS-604850 has a solubility of approximately 0.5 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Phosphatidylinositol 3-kinase (PI3K) catalyzes the phosphorylation of PI at the three position of the inositol ring to produce the second messengers PtdIns-(3,4)-P₂ and PtdIns-(3,4,5)-P₃.¹⁻³ PI3Kγ is a class 1B PI3K that is composed of a p110 catalytic subunit and a p101 or p84 regulatory subunit, whereas PI3Kα, β, and δ are class 1A enzymes composed of p110 and p85 subunits.⁴ AS-604850 is a selective, ATP-competitive inhibitor of PI3Kγ with IC₅₀ values of 0.25, >20, and 4.5 μM for the human recombinant γ, δ, β, and α isoforms, respectively.⁵ AS-604850 inhibited MCP-1-mediated monocyte chemotaxis with an IC₅₀ value of 21 μM and reduced RANTES-induced peritoneal neutrophil recruitment in a murine model of leukocyte chemotaxis with an ED₅₀ value of 42.4 mg/kg.⁵

References

1. Rameh, L.E. and Cantley, L.C. The role of phosphoinositide 3-kinase lipid products in cell function. *J. Biol. Chem.* **274**, 8347-8350 (1999).
2. Vivanco, I. and Sawyers, C.L. The phosphatidylinositol 3-kinase-AKT pathway in human cancer. *Nature Reviews Cancer* **2**, 489-501 (2002).
3. Hennessy, B.T., Smith, D.L., Ram, P.T., *et al.* Exploiting the PI3K/AKT pathway for cancer drug discovery. *Nature Reviews Drug Discovery* **4**, 988-1004 (2005).
4. Rückle, T., Schwarz, M.K., and Rommel, C. PI3Kγ inhibition: Towards an 'aspirin of the 21st century'? *Nature Reviews Drug Discovery* **5**, 903-918 (2006).
5. Camps, M., Rückle, T., Ji, H., *et al.* Blockade of PI3Kγ suppresses joint inflammation and damage in mouse models of rheumatoid arthritis. *Nature Med.* **11(9)**, 936-943 (2005).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10010175

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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