

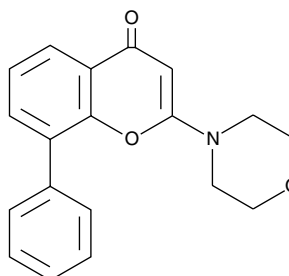
Product Information



LY294002

Item No. 70920

CAS Registry No.: 154447-36-6
Formal Name: 2-(4-morpholinyl)-8-phenyl-4H-1-benzopyran-4-one
MF: C₁₉H₁₇NO₃
FW: 307.3
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
Melting Point: 182-184°C
UV/Vis.: λ_{max}: 223, 302 nm



Laboratory Procedures

For long term storage, we suggest that LY294002 be stored as supplied at -20°C. It should be stable for at least two years.

LY294002 is supplied as a crystalline solid. LY294002 is soluble in solvents such as DMSO, ethanol, and dimethyl formamide. The solubility of LY294002 in these solvents is approximately 16 mg/ml. LY294002 is stable for at least six months in these solvents if stored at -20°C.

LY294002 is sparingly soluble in aqueous solutions (<50 µg/ml in PBS pH 7.2). For maximum solubility in aqueous buffers, LY294002 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. LY294002 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant since organic solvents may have physiological effects at low concentrations. Store aqueous solutions of LY294002 on ice and use within 12 hours of preparation.

LY294002 is a phosphatidylinositol 3-kinase (PI3K) inhibitor. PI3K is an enzyme that phosphorylates the D-3 position of the inositol ring in phosphoinositides, resulting in the formation of PI(3)P, PI(3,4)P₂, and PI(3,4,5)P₃. LY294002 is a selective PI3K inhibitor with a 2.7-fold greater potency than quercetin.¹ LY294002 inhibits purified PI3K with an IC₅₀ of 1.4 µM, but does not inhibit PI4K, EGF receptor, PDGF receptor, insulin receptor, c-src, MAP kinase, S6 kinase, diacylglycerol kinase, protein kinase A, protein kinase C, and ATPase.¹ LY294002 was shown to completely abolish PI3K activity in fMet-Leu-Phe-stimulated human neutrophils, as well as, inhibit proliferation of smooth muscle cells in cultured rabbit aortic segments.¹

Reference

1. Vlahos, C.J., Matter, W.F., Hui, K.Y., *et al.* A specific inhibitor of phosphatidylinositol 3-kinase, 2-(4-morpholinyl)-8-phenyl-4H-1-benzopyran-4-one (LY294002). *J. Biol. Chem.* **269**, 5241-5248 (1994).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/70920

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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