



LY294002
2-(4-Morpholinyl)-8-phenyl-4H-1-
benzopyran-4-one
PRODUCT ANALYSIS SHEET

Catalog Number:	PHZ1144
Lot Number:	See product label
Quantity:	5.0 mg
Appearance:	Off-white to pale yellow solid
Molecular Formula:	C ₁₉ H ₁₇ NO ₃
Molecular Weight:	307.4
Purity:	99%, as assessed by TLC
Summary:	LY294002 is a potent and specific cell-permeable inhibitor of phosphatidylinositol 3-kinase (PI3-kinase). LY294002 at a concentration of 50 μM completely abolishes the PI3-K activity of intact neutrophils stimulated with fMet-Leu-Phe, without apparent cell toxicity. While a concentration of 50 μM is observed to be efficacious for inhibiting PI3-K activity in stimulated neutrophils, this concentration produces no significant inhibition of other kinases including PKC, PKA, MAP kinase, S6 kinase, EGF receptor tyrosine kinase, Src, PI4-kinase, diacylglycerol kinase, or rabbit kidney ATPase. This compound is a useful tool for identifying cellular events that are regulated by the PI3-kinase/Akt axis, and is observed to induce apoptosis in many cell types by blocking the PI3-kinase/Akt anti-apoptotic pathway.
Biological Activity:	IC ₅₀ = 1.4 μM
Solubility:	Soluble in warm DMSO at a concentration of 25 mg/mL; soluble in warm ethanol at a concentration of 25 mg/mL.
Sterility:	This product is not sterile.
Storage:	Store, as supplied, at -20°C. Upon solubilization, apportion into working aliquots and store at -20°C. Avoid repeated freeze/thaw cycles. Solutions are stable at -20°C for up to three months.
Expiration Date:	Expires one year from date of receipt when stored as instructed.
Related Products:	Akt/PKB [pS ⁴⁷³] antibody, Cat. # 44-622
References:	Vlahos, C.J., et al. (1994) A specific inhibitor of phosphatidylinositol 3-kinase, 2-(4-morpholinyl)-8-phenyl-4H-1-benzopyran-4-one (LY294002). <i>J. Biol. Chem.</i> 269(7):5241-5248. Sanchez-Margalet, V., et al. (1994) Role of phosphatidylinositol 3-kinase in insulin receptor signaling: studies with inhibitor, LY294002. <i>Biochem. Biophys. Res. Commun.</i> 204(2):446-452. Bancroft, C.C., et al. (2002) Effects of pharmacologic antagonists of epidermal growth factor receptor, P13K and MEK signal kinases on NF-kappaB and AP-1 activation and IL-8 and VEGF expression in human head and neck squamous cell carcinoma lines. <i>Int. J. Cancer</i> 99(4):538-548. Williamson, R., et al. (2002) Rapid tyrosine phosphorylation of neuronal proteins including tau and focal adhesion kinase in response to amyloid-beta peptide exposure: involvement of Src family protein kinases. <i>J. Neurosci.</i> 22(1):10-20. Shoba, L.N., et al. (2001) LY294002, an inhibitor of phosphatidylinositol 3-kinase, inhibits GH-mediated expression of the IGF-I gene in rat hepatocytes. <i>Endocrinology</i> 142(9):3980-3986.

This product is for research use only. Not for use in diagnostic procedures.

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Caution:

Avoid contact with eyes, skin, and mucous membranes. Wear protective clothing when handling this product. Not for human use.

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