

LY294002 (PI3 Kinase Inhibitor)

✓ 1.5 mg (lyophilized powder)

Orders ■ 877-616-CELL (2355)
orders@cellsignaling.com

Support ■ 877-678-TECH (8324)
info@cellsignaling.com

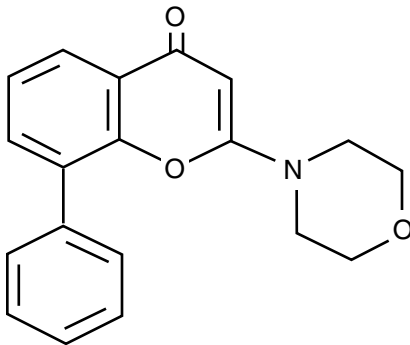
Web ■ www.cellsignaling.com

rev 08/22/07

This product is for *in vitro* research use only and is not intended for use in humans or animals.

Background: LY294002 (PI3 Kinase Inhibitor) was shown to act *in vivo* as a highly selective inhibitor of phosphatidylinositol 3 (PI3) kinase. When used at a concentration of 50 μ M, it specifically abolished PI3 kinase activity (IC₅₀=0.43 μ g/ml; 1.40 μ M) but did not inhibit other lipid and protein kinases such as PI4 kinase, PKC, MAP kinase or c-Src (1). LY294002 is soluble in DMSO or ethanol. For use with *in vitro* or cell-based assays, it may be diluted into aqueous buffers to yield the desired concentrations. For experiments with cultured cells, CST recommends treating the cells with LY294002 for one hour prior to, and for the duration of, the stimulation. LY294002 has been shown to block PI3 kinase-dependent Akt phosphorylation and kinase activity.

Molecular Formula: C₁₉H₁₇NO₃

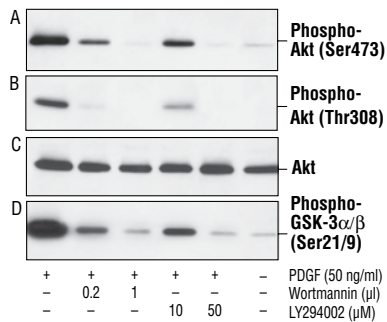


Molecular Weight: 307 g/mol

Directions for Use: For 10 mM stock, reconstitute 1.5 mg in 488 μ l DMSO. For 50 mM stock, reconstitute 1.5 mg in 98 μ l DMSO. Store aliquots at -20°C.

Selected Application References:

Guo, M. et al. (2000) Suppression of 2,3,7,8-tetrachlorodibenzo-p-dioxin (TCDD)-mediated aryl hydrocarbon receptor transformation and CYP11A1 induction by the phosphatidylinositol 3-kinase inhibitor 2-(4-morpholinyl)-8-phenyl-4H-1-benzopyran-4-one (LY294002). *Biochem. Pharmacol.* 60, 635–642.



Western blot analysis of extracts from PDGF, wortmannin and LY294002 treated NIH/3T3 cells using Phospho-Akt (Ser473) Antibody #9271 (A), Phospho-Akt (Thr308) Antibody #9275 (B) or Akt Antibody #9272 (C). D is an analysis of Akt activity in PDGF, wortmannin and LY294002 treated NIH/3T3 cells using Akt Kinase Assay Kit #9840.

Panka, D. J. et al. (2001) Phosphatidylinositol 3-kinase/Akt activity regulates c-FLIP expression in tumor cells. *J. Biol. Chem.* 276, 6893–6896.

Schwartzbauer, G. and Robbins, J. (2001) The tumor suppressor gene PTEN can regulate cardiac hypertrophy and survival. *J. Biol. Chem.* 276, 35786–35793.

Martin, M.C. et al. (2001) Cyclic AMP regulation of neutrophil apoptosis occurs via a novel protein kinase A-independent signaling pathway. *J. Biol. Chem.* 276, 45041–45050.

Background References:

(1) Vlahos, C. (1994) *J. Biol. Chem.* 269, 5241–5248.

Storage: Supplied as a lyophilized off-white powder. Store tightly sealed at or below -20°C in the dark.

Companion Products:

PhosphoPlus® Akt (Ser473) Antibody Kit #9270
Phospho-Akt (Ser473) Antibody #9271
Akt Antibody #9272
Phospho-Akt (Thr308) Antibody #9275
PTEN Antibody #9552
Akt Kinase Assay Kit (Nonradioactive) #9840
Phospho-Akt (Thr308) (244F9) Rabbit mAb #4056
Phospho-Akt (Ser473) (193H12) Rabbit mAb #4058
PTEN (138G6) Rabbit mAb #9559
Anti-rabbit IgG, HRP-linked Antibody #7074
Anti-mouse IgG, HRP-linked Antibody #7076
Prestained Protein Marker, Broad Range (Premixed Format) #7720
Biotinylated Protein Ladder #7727
20X LumiGLO® Reagent and 20X Peroxide #7003

