

# LY294002

1.5 mg (lyophilized powder)

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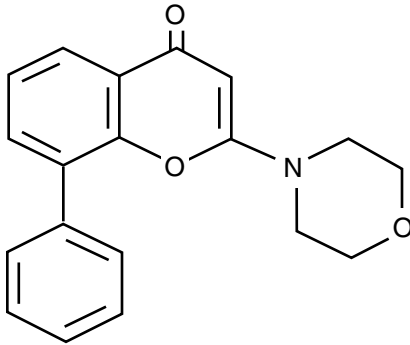
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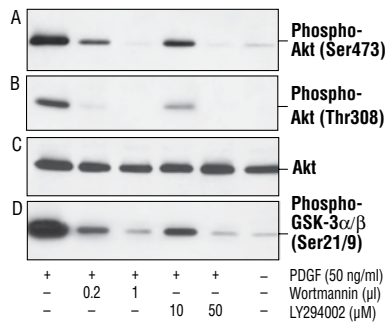
**For Research Use Only. Not For Use In Diagnostic Procedures.**

**Background:** LY294002 was shown to act *in vivo* as a highly selective inhibitor of phosphatidylinositol 3 (PI3) kinase. When used at a concentration of 50  $\mu$ M, it specifically abolished PI3 kinase activity (IC<sub>50</sub>=0.43  $\mu$ g/ml; 1.40  $\mu$ 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:** C<sub>19</sub>H<sub>17</sub>NO<sub>3</sub>



**Molecular Weight:** 307 g/mol



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.

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

**Background References:**

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

**Storage:** Store lyophilized or in solution at -20°C, desiccated. Protect from light. In lyophilized form, the chemical is stable for 24 months. Once in solution, use within 3 months to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.