Revision 1

Store at -20C

#9901

LY294002

1.5 mg

Cell Signaling TECHNOLOGY®

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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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 µM, it specifically abolished PI3 kinase activity (IC50=0.43 µg/ml; 1.40 µM) 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

$C_{19}H_{17}NO_3$

Molecular Weight

307.35 g/mol

Purity

>99%

CAS

154447-36-6

Solubility

Soluble in DMSO and EtOH at 25mg/ml.

Storage

Store lyophilized or in solution at -20ºC, desiccated. 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.

Directions for Use:

For 10 mM stock, reconstitute 1.5 mg in 488 µl DMSO. For 50 mM stock, reconstitute 1.5 mg in 98 µl DMSO. Store aliquots at -20ºC.

Background References

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

Cross-Reactivity Key

H: human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster
X: Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse
GP: Guinea Pig **Rab:** rabbit **All:** all species expected

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