

# LY294002

**Catalog No: tcsc0150**



## Available Sizes

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**Size:** 10mg

**Size:** 50mg

**Size:** 100mg

**Size:** 200mg

**Size:** 500mg

**Size:** 1g



## Specifications

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**CAS No:**

154447-36-6

**Formula:**

$C_{19}H_{17}NO_3$

**Pathway:**

PI3K/Akt/mTOR;Autophagy

**Target:**

PI3K;Autophagy

**Storage Buffer:**

5% DMSO+ 40%PEG 300+5% Tween 80+50%water , 3 mg/mL

**Purity / Grade:**

>98%

**Solubility:**

DMSO : 51.67 mg/mL (168.1 mM)

Water: insoluble

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**Storage Instruction:**

Powder: -20°C for 3 years In solvent : -80°C for 12 months

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**Alternative Names:**

NSC 697286;SF 1101

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**Observed Molecular Weight:**

307.34

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**Notes**

LY294002 acts at the ATP-binding site of the PI3Ks enzyme.

**Product Description**

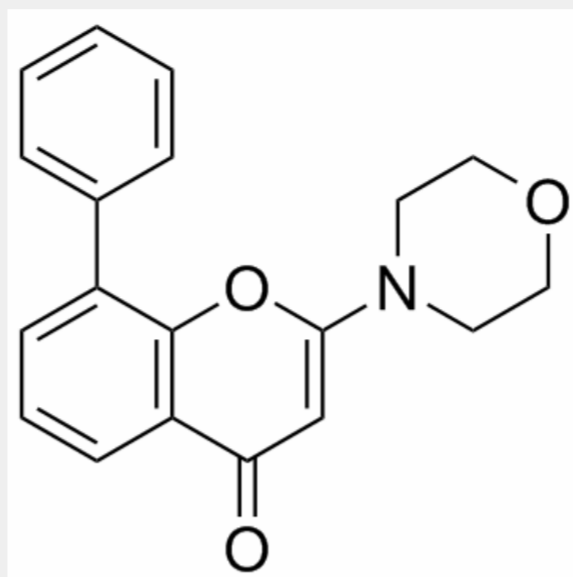
LY294002 is a broad-spectrum inhibitor of **PI3K** with **IC<sub>50</sub>s** of 0.5, 0.57, and 0.97 μM for **PI3Kα**, **PI3Kδ** and **PI3Kβ**, respectively. It also inhibits **CK2** with an **IC<sub>50</sub>** of 98 nM.

IC<sub>50</sub> & Target: IC<sub>50</sub>: 0.5/0.57/0.97 μM (PI3Kα/δ/β)<sup>[1]</sup>

IC<sub>50</sub>: 98 nM (CK2)<sup>[2]</sup>

**In Vitro:** LY294002 (5 μM) completely inhibits the phosphorylation of PKB In HepG2 cells. LY294002 (5 μM) is also shown to block insulin-induced phosphorylation of PKB Ser<sup>473</sup> in CHO-IR cells<sup>[1]</sup>. LY294002 is also a potent inhibitor of CK2 (casein kinase 2) with IC<sub>50</sub> of 98 nM. LY294002 is also able to reduce the kinase activity of both isoforms of the serine/threonine kinases GSK3α and β<sup>[2]</sup>. When the CNE-2Z cell line is cultured in medium containing LY294002(0 μM, 10 μM, 25 μM, 50 μM, and 75 μM) for 24 h and 48 h, cell proliferation is remarkably decreased in a dose-dependent fashion<sup>[3]</sup>.

**In Vivo:** Treatment with LY294002 (i.p.,50 mg/kg, 75 mg/kg) significantly reduces mean NPC tumor burden as compared with the control group. Treatment with 10 mg/kg or 25 mg/kg LY294002 is less effective in decreasing tumor burden. Mean NPC tumor burden treated with LY294002 is remarkably decreased in a dose-dependent manner, whereas mean body weight is no obvious difference between control and treated groups (LY294002, 10 mg/kg, 25 mg/kg, 50 mg/kg, and 75 mg/kg)<sup>[3]</sup>.



## Protocol

Preparing Stock Solution	Volume	Mass	1 mg	5 mg	10 mg
	Concentration				
	1mM		3.2537 mL	16.2685 mL	32.5369 mL
	5mM		0.6507 mL	3.2537 mL	6.5074 mL
	10mM		0.3254 mL	1.6268 mL	3.2537 mL

All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!