

Certificate of Analysis

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Product Name: LY 294002 hydrochloride

Catalog No.: 1130

Batch No.: 4

CAS Number: 934389-88-5

IUPAC Name: 2-(4-Morpholinyl)-8-phenyl-4*H*-1-benzopyran-4-one hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₁₉H₁₇NO₃.HCl.½H₂O

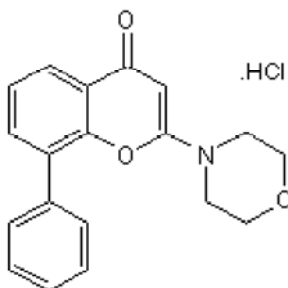
Batch Molecular Weight: 352.82

Physical Appearance: Off-white solid

Solubility: DMSO to 25 mM
ethanol to 5 mM

Storage: Store at RT

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 100% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	64.68	5.43	3.97
Found	64.83	5.31	4.15

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

Prototypical PI 3-kinase inhibitor (IC₅₀ values are 0.31, 0.73, 1.06 and 6.60 μM for PI 3-Kβ, PI 3-Kα, PI 3-Kδ and PI 3-Kγ respectively). Also inhibits other kinases including, CK2, mTOR, PLK1, PIM1 and PIM3. Inhibits proliferation and induces apoptosis in human colon cancer cells in vitro and in vivo. Suppresses proliferation of mESCs. Inhibits autophagic sequestration in rat hepatocytes. Negative Control also available.

Physical and Chemical Properties:

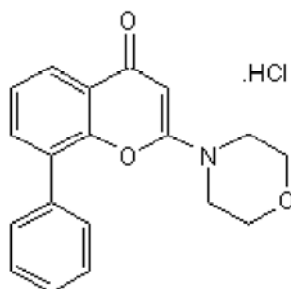
Batch Molecular Formula: C₁₉H₁₇NO₃.HCl.½H₂O

Batch Molecular Weight: 352.82

Physical Appearance: Off-white solid

Minimum Purity: >99%

Batch Molecular Structure:



Storage: Store at RT

Solubility & Usage Info:

DMSO to 25 mM
ethanol to 5 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Bain et al (2007) The selectivity of protein kinase inhibitors: a further update. *Biochem.J.* **408** 297. PMID: 17850214.

Lianguzova et al (2007) Phosphoinositide 3-kinase inhibitor LY294002 but not serum withdrawal suppresses proliferation of murine embryonic stem cells. *Cell Biol.Int.* **31** 330. PMID: 17321171.

Blommaert et al (1997) The phosphatidylinositol 3-kinase inhibitors wortmannin and LY294002 inhibit autophagy in isolated rat hepatocytes. *Eur.J.Biochem.* **243** 240. PMID: 9030745.

Vlahos et al (1994) A specific inhibitor of phosphatidylinositol 3-kinase, 2-(4-morpholinyl)-8-phenyl-4H-1-benzopyran-4-one (LY 294002). *J.Biol.Chem.* **269** 5241. PMID: 8106507.

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