Revision 3

Store at -20C

#12147

PD184352

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Background

PD184352 (CI-1040) is a highly potent and selective noncompetitive MEK inhibitor with an IC_{50} of 17 nM for MEK1 (1). Treatment of cells with PD184352 leads to suppression of MAPK activation (1-4) and potently inhibits the proliferation of cells harboring the B-Raf mutation V600E (2,3). Researchers have shown that PD184352 effectively inhibits MEK5, although not as potently as MEK1 (4).

Molecular Formula

$C_{17}H_{14}ClF_2IN_2O_{22}$

Molecular Weight

478.66 g/mol

Purity

>99%

CAS

212631-79-3

Solubility

Soluble in DMSO at 50mg/ml and EtOH at 8.3mg/ml.

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.

Directions for Use

PD184352 is supplied as a lyophilized powder. For a 10 mM stock, reconstitute the 5 mg in 1044.6 µl DMSO. Working concentrations and length of treatment can vary depending on the desired effect, but it is typically used as a pretreatment at 0.1-10 µM for 0.5-1 hr prior to treating with a stimulator or is used alone with varying treatment times lasting up to 24 hr. Soluble in DMSO at 25 mg/ml and ethanol at 8 mg/ml with warming; poorly soluble in water with maximum solubility in water at ~5-10 µM.

Background References

1. Sebolt-Leopold, J.S. et al. (1999) *Nat Med* 5, 810-6.
2. Liu, D. et al. (2007) *J Clin Endocrinol Metab* 92, 4686-95.
3. Solit, D.B. et al. (2006) *Nature* 439, 358-62.
4. Mody, N. et al. (2001) *FEBS Lett* 502, 21-4.

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Limited Uses