Revision 3

Store at -20C

#12998

Vatalanib

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

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

Background

Vatalanib is a multi-targeted tyrosine kinase inhibitor. Researchers performing *in vitro* kinase assays show that vatalanib inhibits VEGFR-1, -2, and -3 with IC_{50} values of approximately 77 nM, 37 nM, and 640 nM, respectively. Vatalanib also inhibited PDGFR and c-kit at sub micromolar concentrations, but had no activity against several other kinases, including c-Met, EGFR, c-Src, and v-Abl up to 10 µM (1). Vatalanib inhibits VEGF-induced autophosphorylation in HUVE and VEGFR-2 transfected CHO cells with an IC_{50} of 17 nM and 34 nM, respectively, and effectively blocks VEGF-stimulated HUVE cell proliferation (1). Research studies have demonstrated that vatalanib inhibits proliferation of multiple myeloma (MM) cells in a dose-dependant manner and blocks VEGF-induced ERK phosphorylation and cell migration in MM.1S cells (2). Dose-dependent apoptosis in chronic lymphocytic leukemia (CLL) cells by vatalanib and pazopanib has been observed (3).

Molecular Formula

$C_{20}H_{15}ClN_4 \cdot 2HCl$

Molecular Weight

419.73 g/mol

Purity

>99%

CAS

212141-51-0

Solubility

Soluble in DMSO at 20mg/ml and H2O at 100mg/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

Vatalanib is supplied as a lyophilized powder. For a 10 mM stock, reconstitute the 5 mg in 1.19 ml DMSO. Working concentrations and length of treatment can vary depending on the desired effect, but it is typically used as a pretreatment at 0.5-50 µM for 0.5-2 hr prior to treating with a stimulator. It can also be used alone, with varying treatment times lasting up to 72 hr.

Background References

1. Wood, J.M. et al. (2000) *Cancer Res* 60, 2178-89.
2. Lin, B. et al. (2002) *Cancer Res* 62, 5019-26.
3. Paesler, J. et al. (2010) *Clin Cancer Res* 16, 3390-8.

Trademarks and Patents

Limited Uses

attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.