Tyrphostin AG1433

Cat. No.: HY-119757

CAS No.: 168835-90-3

Molecular Formula: $C_{16}H_{14}N_2O_2$

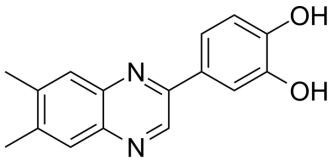
Molecular Weight: 266.29

Target: PDGFR; VEGFR

Pathway: Protein Tyrosine Kinase/RTK

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 62.5 mg/mL (234.71 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.7553 mL	18.7765 mL	37.5530 mL
	5 mM	0.7511 mL	3.7553 mL	7.5106 mL
	10 mM	0.3755 mL	1.8777 mL	3.7553 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (7.81 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Tyrphostin AG1433 (SU1433) is a tyrosine kinases inhibitor. AG1433 is also a selective PDGFRβ and VEGFR-2 (Flk-1/KDR) inhibitor with IC_{50}s of 5.0 μM and 9.3 μM, respectively. Tyrphostin AG1433 prevents blood vessel formation[1][2][3][4].

IC_{50} & Target

Flk-1	PDGFRβ
9.3 μM (IC_{50})	5 μM (IC_{50})

In Vitro

Tyrphostin AG1433 (0.1-100 μM; 72 hours; GB8B cells) treatment induces moderate cytotoxicity in glioblastoma cells[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	GB8B cells

Concentration:	0.1 μM, 1 μM, 5 μM, 10 μM, 20 μM, 30 μM, 50 μM, 60 μM, 100 μM
Incubation Time:	72 hours
Result:	Induced significant cell death in GB8B cells in a concentration-dependent manner.

In Vivo

Chorion allantoic membrane (CAM) assays are used to determine the effects of the Flk-i inhibitors on angiogenesis. Tyrphostin AG1433 (SU1433) is prepared in methylcellulose pellets and applies to the CAMs of 4-6-day-old chicken embryos. Tyrphostin AG1433 prevents the formation of new yessels under the pellets[2].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Serban F, et al. Silencing of epidermal growth factor, latrophilin and seven transmembrane domain-containing protein 1 (ELTD1) via siRNA-induced cell death in glioblastoma. J Immunoassay Immunochem. 2017;38(1):21-33.

[2]. Strawn LM, et al. Flk-1 as a target for tumor growth inhibition. Cancer Res. 1996 Aug 1;56(15):3540-5.

[3]. Kim TS, et al. The ZFHX3 (ATBF1) transcription factor induces PDGFRB, which activates ATM in the cytoplasm to protect cerebellar neurons from oxidative stress. Dis Model Mech. 2010 Nov-Dec;3(11-12):752-62.

[4]. Kroll J, et al. The vascular endothelial growth factor receptor KDR activates multiple signal transduction pathways in porcine aortic endothelial cells. J Biol Chem. 1997 Dec 19;272(51):32521-7.

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