Product Data Sheet

Product Name: ST638
Cat. No.: GC11520

Chemical Properties

Cas. No.	107761-24-0		
Chemical Name	2-cyano-3-[3-ethoxy-4-hydroxy-5-[(5-phenylthio)methyl]phenyl]-2-propenamide		
SMILES	OC1=C(C=C(C=C(C(N)=O)C#N)C=C1OCC)CSC2=CC=CC=C2		
Formula	$C_{19}H_{18}N_2O_3S$	M.Wt	354.4
Solubility	≤30mg/ml in DMSO;50mg/ml in dimethyl formamide	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	ST638		

Background

ST638 is a tyrosine kinase inhibitor [1].

Tyrosine kinases are a family of protein kinases that phosphorylate the serine and threonine on other proteins. Phosphorylation of proteins by kinases has been involved in signal transduction and regulating cellular activity, such as cell division. Tyrosine kinases function in a variety of processes, such as mitogenesis, induction of mitosis, and transmembrane signaling [2].

In human platelets, preincubation with 50 μM of ST638 completely blocked the platelet aggregation induced with 0.05 unit/ml of thrombin. ST638 inhibited the increase of protein-tyrosine phosphorylation bands induced with thrombin in a dose-dependent manner. ST638 blocked the platelet aggregation and protein-tyrosine phosphorylation induced with thrombin in aspirin-treated platelets [1]. In terminal erythroid differentiation of mouse erythroleukemia (MEL) cells, ST638 effectively induced differentiation in a synergistic manner [3]. In rat and rabbit pulmonary artery cells, ST

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638 (0.5 to 40 μmol/L) blocked IK in a dose-dependent manner [4].

References:

[1] Asahi M, Yanagi S, Ohta S, et al. Thrombin-induced human platelet aggregation is inhibited by protein-tyrosine kinase inhibitors, ST638 and genistein[J]. FEBS letters, 1992, 309(1): 10-14.
[2] Levitzki A, Gazit A. Tyrosine kinase inhibition: an approach to drug development[J]. Science, 1995, 267(5205): 1782.
[3] Watanabe T, Shiraishi T, Sasaki H, et al. Inhibitors for protein-tyrosine kinases, ST638 and genistein, induce differentiation of mouse erythroleukemia cells in a synergistic manner[J]. Experimental cell research, 1989, 183(2): 335-342.
[4] Smirnov S V, Aaronson P I. Inhibition of vascular smooth muscle cell K+ currents by tyrosine kinase inhibitors genistein and ST 638[J]. Circulation Research, 1995, 76(2): 310-316.