Product Data Sheet

Product Name: SU5614
Cat. No.: GC14582

Chemical Properties

Cas. No.	1055412-47-9		
Chemical Name	(Z)-5-chloro-3-((3,5-dimethyl-1H-pyrrol-2-yl)methylene)indolin-2-one		
SMILES	CC(C=C(N1)C)=C1/C([H])=C(C2=O)/C3=C(N2)C=CC(Cl)=C3		
Formula	$C_{15}H_{13}ClN_2O$	M.Wt	272.73
Solubility	≥ 27.3mg/mL in DMSO	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	SU5614		

Background

IC50: 100 nM for FLT3 inhibition

SU5614 is a protein tyrosine kinase inhibitor.

Tyrosine kinases are enzymes for the activation of many proteins by signal transduction cascades. The proteins are activated by adding a phosphate group to the protein.

In vitro: Previous study found that SU5614 could induce growth arrest and apoptosis in c-kit-expressing Kasumi-1, M-07e, and UT-7 cells and inhibited the stem cell factor (SCF)-induced tyrosine phosphorylation of c-kit. Moreover, the sensitivity of Kasumi-1 cells towards the growth inhibitory activity of SU5614 was mainly caused by an autocrine production of SCF, but not by the transforming mutations of c-kit [1].

In vivo: It was found that administration of SU5614, a vascular endothelial growth factor (VEGF) inhibitor, to mice could reduce the levels of VEGF dramatically in BAL fluids 72 h

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after toluene diisocyanate inhalation. Moreover, consistent with the results obtained from the enzyme immunoassays, Western blot analyses showed that SU5614 reduced the levels of VEGF in the BAL fluid 72 h after toluene diisocyanate inhalation. These results suggested that VEGF might be one of the major determinants of toluene diisocyanate -induced asthma and that the inhibition of VEGF might be a good therapeutic strategy [2].

Clinical trial: Up to now, SU5614 is still in the preclinical development stage.

References:
[1] Spiekermann K,Faber F,Voswinckel R,Hiddemann W. The protein tyrosine kinase inhibitor SU5614 inhibits VEGF-induced endothelial cell sprouting and induces growth arrest and apoptosis by inhibition of c-kit in AML cells. Exp Hematol.2002 Jul;30(7):767-73.
[2] Lee YC,Kwak YG,Song CH. Contribution of vascular endothelial growth factor to airway hyperresponsiveness and inflammation in a murine model of toluene diisocyanate-induced asthma. J Immunol.2002 Apr 1;168(7):3595-600.