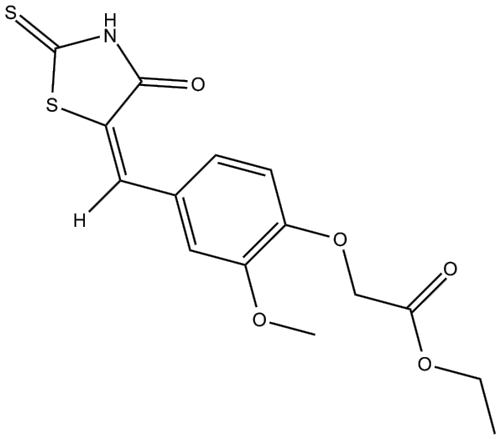
Product Data Sheet

Product Name: IMR-1
Cat. No.: GC12741

Chemical Properties

Cas. No.	310456-65-6		
Chemical Name	(E)-ethyl 2-(2-methoxy-4-((4-oxo-2-thioxothiazolidin-5-ylidene)methyl)phenoxy)acetate		
SMILES	CCOC(COC1=C(OC)C=C(/C([H])=C(S2)\C(NC2=S)=O)C=C1)=O		
Formula	$C_{15}H_{15}NO_5S_2$	M.Wt	353.41
Solubility	≥ 35.3mg/mL in DMSO	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C 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



Background

IC50: 26 μmol/L

IMR-1 is a inhibitor of Notch pathway.

Aberrant Notch activity has been reported to play a important role in the initiation and maintenance of the neoplastic phenotype and in various cancer stem cells, which alludes to its additional involvement

in metastasis and resistance.

In vitro: In order to determine the effect of IMR-1 on the assembly of the Notch ternary complex (NTC) in cells, Notch-dependent cell lines OE33 and 786-0 were treated with IMR-1 or DAPT. Results showed that treatment of OE33 and 786-0 with IMR-1 could decrease the occupancy of Maml1 on the HES1 promoter but, in contrast to DAPT, IMR-1 treatment could not affect the occupancy of Notch1 on the HES1 promoter. In addition, western blot analyses indicated that IMR-1 treatment did not change the cellular levels of NICD [1].

In vivo: Animal study showed that treatment of mice with 15 mg/kg IMR-1 could readily block tumor establishment. Moreover, IMR-1 treatment at 15 mg/kg caused no observable adverse effects on the animal. In two independent PDX models, IMR-1 could significantly abrogate the tumor growth to a similar level achieved with DAPT treatment, without any significant weight loss or other visible signs of adverse effects in the treated mice [1].

Clinical trial: Up to now, IMR-1 is still in the preclinical development stage.

Reference:
[1] Astudillo L,Da Silva TG,Wang Z,et al. The Small Molecule IMR-1 Inhibits the Notch Transcriptional Activation Complex to Suppress Tumorigenesis. Cancer Res.2016 Jun 15;76(12):3593-603.