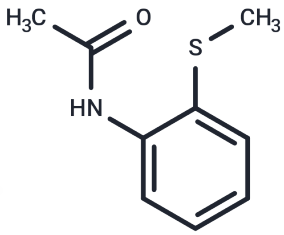
Data Sheet (Cat.No.T2031)

TargetMol

NSC-41589

Chemical Properties



CAS No. : 6310-41-4

Formula: C9H11NOS

Molecular Weight: 181.25

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	NSC-41589 is N-[2-(methylsulfanyl)phenyl]acetamide.
Targets(IC50)	Others
Kinase Assay	Direct PAI-I in vitro activity assays : The chromogenic assay is initiated by the addition of tiplaxtinin (10 – 100 μM final concentration, maximum DMSO concentration of 0.2%) to recombinant human PAI-1 (140 nM in pH 6.6 buffer). After a 15 minute incubation at 25° C, 70 nM of recombinant human t-PA is added, and the combination of tiplaxtinin, PAI-1 and tPA are incubated for an additional 30 minutes. After the second incubation, Spectrozyme tPA, is added and absorbance read at 405 nm at 0 and 60 minutes. Relative PAI-1 inhibitory activity is equal to the residual tPA activity in the tiplaxtinin / PAI-1 treatment. Control treatments include the complete inhibition of tPA by PAI-1 at the molar ratio employed (2:1), and the absence of any effect of the tiplaxtinin on t-PA alone. The immunofunctional assay is based upon the non-SDS dissociable interaction between tPA and active PAI-1. Assay plates are coated with 100 μl of a solution of t-PA (10 μg/ml in TBS), and kept at 4 °C overnight. Tiplaxtinin is dissolved in DMSO and diluted to a final concentration of 1-100 μM as described above. Tiplaxtinin is then incubated with human PAI-1 (50 ng/ml) for 15 minutes, and an aliquot of this solution added to the t-PA-coated plate for 1 h. The solution is aspirated from the plate, which is then washed with a buffer consisting of 0.05% Tween 20 and 0.1% BSA in TBS. This assay detects only active inhibitory PAI-1 (not latent or substrate) bound to the plate, and is quantitated using a monoclonal antibody against human PAI-1 (MA33B8). A 1000X dilution of MA33B8 is added to the plate and incubated at for one hour, aspirated and washed. A secondary antibody consisting of goat anti-mouse IgG (H+L)-AP alkaline phosphatase conjugate is added, incubated for one hour, aspirated and washed. A 100 μl aliquot of alkaline phosphatase solution is added, followed by determination of absorbance at 405 nm 60 minutes later.The quantitation of residual active PAI-1 bound to t-PA at varying concentrations of tiplaxtinin is used to determine the IC50 by fitting the results to a logistic dose-response program, with the IC50 defined as the concentration of compound required to achieve 50% inhibition of PAI-1 activity. The assay sensitivity is 5 ng/ml of human PAI-1 as determined from a standard curve ranging from 0-100 ng/ml of human PAI-1.

Solubility Information

Solubility	DMSO: 65 mg/mL (358.62 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (11.03 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	5.5172 mL	27.5862 mL	55.1724 mL
5 mM	1.1034 mL	5.5172 mL	11.0345 mL
10 mM	0.5517 mL	2.7586 mL	5.5172 mL
50 mM	0.1103 mL	0.5517 mL	1.1034 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Ishmaeva, E.A., Alimova, A.Z., Vereshchagina, Y.A. et al. Russ J Org Chem (2015) 51: 943. https://doi.org/10.1134/S107042801507009X