Data Sheet (Cat.No.T1453)

TargetMol

Phenformin hydrochloride

Chemical Properties

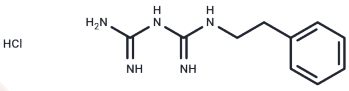
CAS No. : 834-28-6

Formula: C10H16ClN5

Molecular Weight: 241.72

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	Phenformin hydrochloride (Phenformin HCl) is an agent belonging to the biguanide class of antidiabetics with antihyperglycemic activity.
Targets(IC50)	AMPK,Autophagy,Potassium Channel
In vitro	In H441 cells, phenformin increased AMPK activity while decreasing basal ion transport. In isolated hearts, Phenformin increased AMPK activity and phosphorylation. Phenformin significantly induced apoptosis in LKB1-deficient NSCLC cell lines.
In vivo	In H441 cells, phenformin increased AMPK activity while decreasing basal ion transport. In isolated hearts, Phenformin increased AMPK activity and phosphorylation. Phenformin significantly induced apoptosis in LKB1-deficient NSCLC cell lines.
Kinase Assay	Total AMPK activity is measured using the method of Dagher et al. AMPK activity is quantified in the resuspended pellet as incorporation of?32P from [γ-32P]ATP (10 GBq/mmol) into a synthetic peptide with the specific target sequence for AMPK, the SAMS peptide. Radioactivity is measured using a liquid scintillation counter. Protein content in the solution containing the resupended (NH4)2SO4 pellet is determined using the Bradford method.

Solubility Information

Solubility	DMSO: 60 mg/mL (248.22 mM),Sonication is recommended. H2O: 44 mg/mL (182.03 mM),Sonication is recommended. Ethanol: 10 mg/mL (41.37 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.137 mL	20.6851 mL	41.3702 mL
5 mM	0.8274 mL	4.137 mL	8.274 mL
10 mM	0.4137 mL	2.0685 mL	4.137 mL
50 mM	0.0827 mL	0.4137 mL	0.8274 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.

Reference

Sakamoto K, et al. Am J Physiol Endocrinol Metab, 2004, 287(2), E310-317.
Zhang L, et al. Am J Physiol Heart Circ Physiol, 2007, 293(1), H457-466.
Moreira AL, et al. J Exp Med, 1993, 177(6), 1675-1680.
Woollhead AM, et al. J Physiol, 2005, 566(Pt 3), 781-792.
Dilman VM, et al. Arch Geschwulstforsch, 1978, 48(1), 1-8.

Tel:781-999-4286 E_mail:info@targetmol.com Address:36 Washington Street,Wellesley Hills,MA 02481