Product Data Sheet

Product Name: STK393606
Cat. No.: GC12204

Chemical Properties

Cas. No.	355827-05-3		
Chemical Name	2-[[(6-bromo-3H-imidazo[4,5-b]pyridin-2-yl)thio]methyl]-benzonitrile		
SMILES	BrC1=CNC2=NC(SCC3=CC=CC=C3C#N)=NC2=C1		
Formula	$C_{14}H_9BrN_4S$	M.Wt	345.2
Solubility	≤12mg/ml in DMSO;14mg/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	STK393606		

Background

Target: NAD+-dependent type-I 15-hydroxy PGDH

IC50: 26.4 nM

Ki: 5 nM

STK393606 is a competitive inhibitor of NAD+-dependent type-I 15-hydroxy PGDH, with the IC50 value of 26.4±2.4 nM, and the Ki value of 5 nM, which could cause a maximum of 100% inhibition [1].

Hydroxyprostaglandin dehydrogenase 15-(NAD), also called 15-hydroxy prostaglandin dehydrogenase (15-hydroxy PGDH), is a critical enzyme participated in the inactivation of prostaglandins (PGs) and related eiscosanoids. 15-hydroxy PGDH belongs to the family of oxidoreductases, specifically those acting on the CH-OH group of substrates with NAD+ or NADP+ as acceptor. 15-hydroxy PGDH could catalyze the oxidation of primary

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PGs to their 15-keto metabolites [2]. Radioimmunoassay for 15-hydroxy prostaglandin dehydrogenase had identified two types of enzyme activity, of which type-I used NAD+ as a cofactor, while type-II used NADP+ as a cofactor and bear wider substrate specificity [3].

In Vitro: no data available.

In Vivo: no data available.

Clinical trial: no data available.

References:
[1] Niesen F H, Schultz L, Jadhav A, et al. High-Affinity Inhibitors of Human NAD + -Dependent 15-Hydroxyprostaglandin Dehydrogenase: Mechanisms of Inhibition and Structure-Activity Relationships[J]. PLOS ONE, 2010, 5(11).
[2] Tai H, Ensor C M, Tong M, et al. Prostaglandin catabolizing enzymes.[J]. Prostaglandins & Other Lipid Mediators, 2002: 483-493.
[3] Lee S C, Levine L. Prostaglandin metabolism. II. Identification of two 15-hydroxyprostaglandin dehydrogenase types.[J]. Journal of Biological Chemistry, 1975, 250(2): 548-552.

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