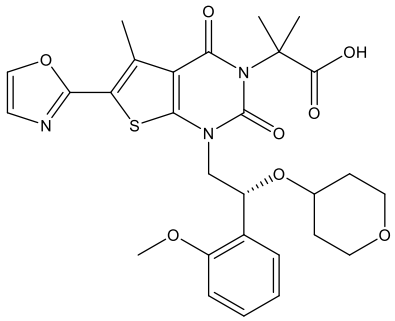
Catalog # 10-4699

Firsocostat

CAS# 1434635-54-7

2-[1-[(2R)-2-(2-Methoxyphenyl)-2-9oxan-4-yloxy)ethyl]-5-methyl-6-(1,3-oxazol-2-yl)-2,4-dioxothieno[2,3-d]pyrimidin-3-yl]-2-methylpropanoic acid; ND-630; NDI-010976; GS-0976

Lot # FBS2213



Firsocostat is a potent (IC_{50} = 1.7 nM ACC1; 2.6 nM ACC2) allosteric protein-protein interaction inhibitor of acetyl-CoA carboxylase (ACC).[1] It interacts with the ACC phosphopeptide acceptor and dimerization site to inhibit enzymatic activity resulting in decreased fatty acid synthesis and stimulation of fatty acid oxidation. It reduced hepatic steatosis, improves insulin sensitivity, reduces weight gain, and favorably affects dyslipidemia in rats. Firsocostat decreased hepatic steatosis and fibrosis markers in patients with nonalcoholic fatty liver disease.[2] Directly impairs profibrinogenic activity of hepatic stellate cells (HSC) via prevention of induction of glycolysis and oxidative phosphorylation during HSC activation.[3]

1) Harriman *et al*. (2016), *Acetyl-CoA carboxylase inhibition by ND-630 reduces hepatic steatosis, improves insulin sensitivity, and modulates dyslipidemia in rats*; Proc. Nat. Acad. Sci. USA, **113** E1796
2) Looma *et al*. (2018), *GS-0976 Reduces Hepatic Steatosis and Fibrosis Markers in Patients With Nonalcoholic Fatty Liver Disease*; Gastroenterology, **155** 1463
3) Bates *et al*. (2020), *Acetyl-CoA carboxylase inhibition disrupts metabolic reprogramming during hepatic stellate cell activation*; J. Hepatol., **73** 896

PHYSICAL DATA

Molecular Weight:	569.63
Molecular Formula:	$C_{28}H_{31}N_3O_8S$
Purity:	98% by HPLC
	NMR: (Conforms)
Solubility:	DMSO (>25 mg/ml)
Physical Description:	White solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase.
	Solutions in DMSO may be stored at -20°C for up to 3 months.

Focus Biomolecules LLC 400 Davis Drive, Suite 600 Plymouth Meeting PA 19462
www.focusbiomolecules.com