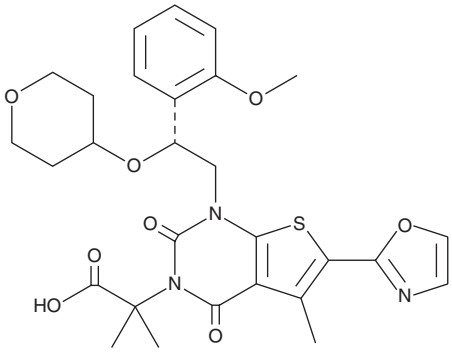
PRODUCT INFORMATION

ND-630

Item No. 23961

CAS Registry No.:	1434635-54-7
Formal Name:	1,4-dihydro-1-[(2R)-2-(2-methoxyphenyl)-2-[(tetrahydro-2H-pyran-4-yl)oxy]ethyl]-α,α,5-trimethyl-6-(2-oxazolyl)-2,4-dioxo-thieno[2,3-d]pyrimidine-3(2H)-acetic acid
Synonyms:	Firsocostat, GS-0976
MF:	$C_{28}H_{31}N_3O_8S$
FW:	569.6
Purity:	≥98%
UV/Vis.:	λ_{max}: 205, 244, 312 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

ND-630 is supplied as a crystalline solid. A stock solution may be made by dissolving the ND-630 in the solvent of choice, which should be purged with an inert gas. ND-630 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of ND-630 in these solvents is approximately 2, 5, and 10 mg/ml, respectively.

Description

ND-630 is an allosteric inhibitor of acetyl-CoA carboxylase (ACC) dimerization that inhibits ACC1 and ACC2 activity (IC_{50}s = 2.1 and 6.1 nM, respectively, for the human enzymes).[1] It is selective for ACC over 101 enzymes, receptors, growth factors, transporters, and ion channels up to a concentration of 10 µM. ND-630 prevents dimerization of ACC by interacting within the phosphopeptide-acceptor and dimerization site. It reduces fatty acid synthesis (EC_{50}s = 66 and 9 nM in 10% FBS and serum-free media, respectively) and increases fatty acid oxidation in HepG2 cells. ND-630 reduces hepatic steatosis in a rat model of diet-induced obesity and in Zucker diabetic rats. It also improves insulin secretion stimulated by glucose and reduces hemoglobin A1c levels by 0.9% in Zucker diabetic rats.

Reference

1. Harriman, G., Greenwood, J., Bhat, S., *et al.* Acetyl-CoA carboxylase inhibition by ND-630 reduces hepatic steatosis, improves insulin sensitivity, and modulates dyslipidemia in rats. *Proc. Natl. Acad. Sci. U.S.A.* **113(13)**, E1796-E1805 (2016).

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