MOLNOVA
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Datasheet (Version 1.0)

Product Name	:	CTPI-2
Synonyms	:	——
Cat No.	:	M22756
CAS Number	:	68003-38-3
Molecular Formula	:	C23H25N3O3
Formula Weight	:	391.47
Chemical Name	:	——
Description	:	CTPI-2 is an inhibitor of mitochondrial citrate carrier SLC25A1 with(KD : 3.5 μM).?CTPI-2 inhibits glycolysis, PPARγ, and its downstream target the glucose transporter GLUT4.?CTPI-2 exhibits anti-tumor activity.CTPI-2 halts salient alterations of NASH reverting steatosis, preventing the evolution to steatohepatitis, reducing inflammatory macrophage infiltration in the liver and adipose tissue, and starkly mitigating obesity induced by a high-fat diet.CTPI-2, halts salient alterations of NASH reverting steatosis, preventing the evolution to steatohepatitis, reducing inflammatory macrophage infiltration in the liver and adipose tissue, while starkly mitigating obesity induced by a high-fat diet.?These effects are differentially recapitulated by a global ablation of one copy of the Slc25a1 gene or by a liver-targeted Slc25a1 knockout, which unravel dose-dependent and tissue-specific functions of this protein.?Mechanistically, through citrate-dependent activities, Slc25a1 inhibition rewires the lipogenic program, blunts signaling from peroxisome proliferator-activated receptor gamma, a key regulator of glucose and lipid metabolism, and inhibits the expression of gluconeogenic genes.?The combination of these activities leads not only to inhibition of lipid anabolic processes, but also to a normalization of hyperglycemia and glucose intolerance as well.
Pathway	:	Others
Target	:	Other Targets
Receptor	:	SLC25A1
Solubility	:	——
SMILES	:	OC(=O)c1ccccc1NS(=O)(=O)c1ccc(Cl)c(c1)[N+]([O-])=O
Storage	:	(-20℃)
Stability	:	≥ 2 years
Reference	:	

1. Tan M, et al. Inhibition of the mitochondrial citrate carrier, Slc25a1, reverts steatosis, glucose intolerance, and inflammation in preclinical models of NAFLD/NASH. Cell Death Differ. 2020;27(7):2143-2157.