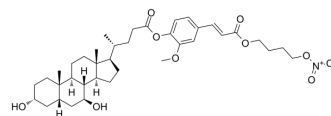


NCX 1000

Cat. No.:	HY-U00023
CAS No.:	401519-96-8
Molecular Formula:	C ₃₈ H ₅₅ NO ₁₀
Molecular Weight:	685.84
Target:	Endogenous Metabolite
Pathway:	Metabolic Enzyme/Protease
Storage:	<div>Powder</div> <div>-20°C 3 years</div> <div>4°C 2 years</div> <div>In solvent</div> <div>-80°C 2 years</div> <div>-20°C 1 year</div>



BIOLOGICAL ACTIVITY

Description	NCX 1000 is a liver-specific NO donor compound derived from ursodeoxycholic acid (UDCA).
IC ₅₀ & Target	Human Endogenous Metabolite
In Vivo	<p>NCX-1000 (15 mg/kg, p.o.) prevents ascite formation, reduces collagen deposition in CCl₄-treated rats. NCX-1000 administration almost completely reverts portal hypertension induced by CCl₄, and reduces portal pressure in cirrhotic rats. NCX-1000 reverts HSC contraction induced by FCS, and also inhibits MCP-1 release from HSCs stimulated with TNF-α and IFN-γ^[1]. NCX-1000 (28 mg/kg, p.o.) decreases portal pressure without affecting mean arterial pressure and heart rate in rats. NCX-1000 also reduces vasoconstriction by 60% caused by 30 μM NE in rats. Administration of NCX-1000 to BDL and sham operated rats results in a similar increase of nitrite/nitrate and cGMP concentrations in the liver^[2].</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>

PROTOCOL

Animal Administration ^[1]	<p>Rats: On the first protocol, 54 rats, 12 animals/group unless specified, are randomly allocated to receive one of the following treatments: group 1 has phenobarbital induction and no further treatment; group 2 (16 animals) is treated with CCl₄ twice a week for 8 weeks; group 3 has CCl₄ twice a week plus UDCA (15 mg/kg); and group 4 has CCl₄ twice a week plus NCX-1000 (15 mg/kg). NCX-1000 and UDCA are dissolved in carboxymethyl cellulose and administered daily by gavage. Animal weight is monitored daily through the study period, and the dosage of CCl₄ is adjusted accordingly to the animal weight. At the end of the treatment surviving animals are killed by an overdose of urethane, and blood, ascitic fluid, and livers are collected. A portion of each liver is fixed in 10% formalin for histological evaluation. The remaining tissue is partitioned and immediately stored under frozen liquid nitrogen at -80°C until used. On the second protocol, 74 rats are randomly allocated to receive the same treatments as protocol 1. At the end of the study, surviving animals are tested for portal and arterial pressure measurement.</p> <p>MCE has not independently confirmed the accuracy of these methods. They are for reference only.</p>
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REFERENCES

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- [1]. Fiorucci S, et al. NCX-1000, a NO-releasing derivative of ursodeoxycholic acid, selectively delivers NO to the liver and protects against development of portal hypertension. *Proc Natl Acad Sci U S A*. 2001 Jul 17;98(15):8897-902. Epub 2001 Jul 10.
- [2]. Fiorucci S, et al. NCX-1000, a nitric oxide-releasing derivative of ursodeoxycholic acid, ameliorates portal hypertension and lowers norepinephrine-induced intrahepatic resistance in the isolated and perfused rat liver. *J Hepatol*. 2003 Dec;39(6):932-9.
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Caution: Product has not been fully validated for medical applications. For research use only.

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