

# Non-Alcoholic Steatohepatitis (NASH)

## Research Tools

Non-alcoholic steatohepatitis (NASH) is a type of non-alcoholic fatty liver disease (NAFLD) characterized by abnormal accumulation of lipids and cellular damage, and the presence of sustained inflammation within the liver. NASH can progress further to more chronic conditions such as fibrosis, cirrhosis, and even hepatocellular carcinoma. The molecular mechanisms involved in the development and progression of NASH remain poorly understood. Cayman offers a range of biochemical tools and assay kits to assist investigators in their study of this growing health problem.

### Biochemicals

Item No.	Product Name	Description
11686	Betulinic Acid	TGR5 agonist ( $EC_{50} = 1 \mu\text{M}$ ); reduces NF- $\kappa\text{B}$ signaling in LPS-treated macrophages and increases ABCA1 expression
12032	BI6015	HNF4 $\alpha$ antagonist that causes dose-dependent fat accumulation (steatosis) in liver
10008335	all-cis-4,7,10,13,16-Docosapentaenoic Acid	DPA isomer; concentrations increased in NASH
16624	GPR120 Compound A	Decreases hepatic steatosis when included at 30 mg/kg body weight in a high-fat diet fed to obese mice
17678	INT-777	TGR5 agonist ( $EC_{50} = 0.82 \mu\text{M}$ ); reduces hepatic steatosis and adiposity in mice subjected to diet-induced obesity
10739	Isoliquiritigenin	Exhibits antioxidant, anti-inflammatory, and antitumor activities, as well as hepatoprotection against steatosis-induced oxidative stress
13118	Metformin (hydrochloride)	Improves fatty liver disease by reversing hepatic steatosis in <i>ob/ob</i> mice
18293	MHY908	Improves hepatic steatosis by enhancing CPT1 levels and reducing ER stress and JNK activation in livers of <i>db/db</i> mice
15192	ML-261	Inhibits hepatic lipid droplet formation ( $IC_{50} = 69.7 \text{ nM}$ in mouse AML-12 hepatocytes)
14173	Naringenin	Corrects VLDL overproduction, ameliorates hepatic steatosis, and attenuates dyslipidemia in LDL receptor-deficient mice fed a Western diet
17118	Niclosamide (ethanolamine salt)	Prevents high-fat diet-induced hepatic steatosis in <i>db/db</i> mice
19131	NK 252	Exhibits antifibrotic effects in a rat model of NASH
16209	<i>p</i> -nitro-Pifithrin- $\alpha$	Attenuates steatosis and liver injury in mice fed a high-fat diet
18771	SR9238	LXR $\alpha$ and LXR $\beta$ inverse agonist ( $IC_{50}$ s = 214 and 43 nM, respectively); suppresses hepatic lipogenesis, inflammation, lipid accumulation, and fibrosis in mouse models of NASH
16291	TGR5 Receptor Agonist	Activator of TGR5 ( $pEC_{50} = 6.8-7.5$ ); increases GLP-1 secretion and improves glucose disposal

View a complete list of our tools for **metabolism research** at [www.caymanchem.com](http://www.caymanchem.com)

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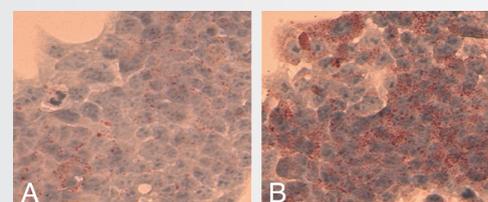
## Research Tools

### FEATURED ASSAY

**Steatosis Colorimetric Assay Kit**  
Item No. 10012643

#### Features:

- Detect excessive lipid accumulation in cells
- Assess by microscopy or plate reader
- An inducer of lipid accumulation is included as a positive control



Effect of chloroquine on lipid droplet accumulation in HepG2 cells. Panel A: HepG2 cells treated with vehicle. Panel B: HepG2 cells treated with 25  $\mu$ M chloroquine show significant accumulation of lipid droplets (red dots) visualized by Oil Red O staining.

### Assays Kits

Item No.	Product Name	Description
700260	Alanine Transaminase Colorimetric Activity Assay Kit	Convenient method for measuring alanine transaminase activity levels in serum, plasma, tissue, and cell lysates
10007640	Cholesterol Fluorometric Assay Kit	Plate-based assay for quantifying total cholesterol in plasma or serum
700310	Free Fatty Acid Fluorometric Assay Kit	Fluorescence-based method for measuring free fatty acid in plasma, serum, and urine
501030	Interleukin-6 (human) ELISA Kit	Measure interleukin-6 in human plasma, serum, synovial fluid, and other sample matrices
500001	Lipid Droplets Fluorescence Assay Kit	Fluorescence-based method for sensitive detection of cellular lipid droplets
589201	TNF- $\alpha$ (human) ELISA Kit	Sensitive, specific ELISA for measuring TNF- $\alpha$ in human plasma, serum, and other sample matrices
500850	TNF- $\alpha$ (mouse) ELISA Kit	Sensitive, specific ELISA for measuring TNF- $\alpha$ in mouse plasma, serum, and other sample matrices
10010303	Triglyceride Colorimetric Assay Kit	Simple assay for measuring triglyceride levels in plasma, serum, cell lysates, and tissue homogenates

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FRONTIERS IN LIFE SCIENCE

フナコシ株式会社

〒113-0033 東京都文京区本郷 2-9-7

<http://www.funakoshi.co.jp>

Tel: 03-5684-1620

Fax: 03-5684-1775

Email: [regent@funakoshi.co.jp](mailto:regent@funakoshi.co.jp)