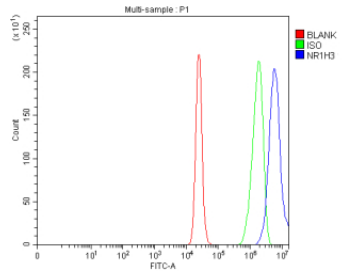
NR1H3 Antibody / Oxysterols receptor LXR-alpha (FY13156)

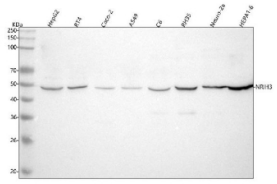
Catalog No.	Formulation	Size
FY13156	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q13133
Applications	Western Blot: 0.25-0.5ug/ml Flow cytometry: 1-3ug/million cells ELISA: 0.1-0.5ug/ml
Limitations	This NR1H3 antibody is available for research use only.



Flow Cytometry analysis of RT4 cells using anti-NR1H3 antibody. Overlay histogram showing RT4 cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-NR1H3 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



Western blot analysis of NR1H3 using anti-NR1H3 antibody. Lane 1: human HepG2 whole cell lysates, Lane 2: human RT4 whole cell lysates, Lane 3: human Caco-2 whole cell lysates, Lane 4: human whole cell lysates, Lane 5: rat C6 whole cell lysates, Lane 6: rat RH35 whole cell lysates, Lane 7: mouse Neuro-2a whole cell lysates, Lane 8: mouse HEPA1-6 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-NR1H3 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using enhanced chemiluminescent. A specific band was detected for NR1H3 at approximately 50 kDa. The expected molecular weight of NR1H3 is ~50 kDa.

Description

NR1H3 antibody detects Oxysterols receptor LXR-alpha, a nuclear receptor that regulates lipid metabolism, inflammation, and cholesterol homeostasis. The UniProt recommended name is Oxysterols receptor LXR-alpha (NR1H3). This transcription factor belongs to the nuclear receptor superfamily and functions as a ligand-activated regulator controlling expression of genes involved in lipid transport and metabolism.

Functionally, NR1H3 antibody identifies a 447-amino-acid receptor that binds oxysterol ligands, including 24(S)-hydroxycholesterol and 27-hydroxycholesterol. Upon activation, NR1H3 forms heterodimers with RXR and binds to LXR response elements in target gene promoters, stimulating transcription of ABCA1, SREBP-1c, and APOE to promote cholesterol efflux and fatty acid synthesis.

The NR1H3 gene is located on chromosome 11p11.2 and is highly expressed in liver, macrophages, and intestine. Its activity coordinates lipid handling in hepatocytes and immune cells, maintaining systemic cholesterol balance and preventing lipid accumulation. NR1H3 also modulates inflammatory gene expression by antagonizing NF-kappaB signaling.

Pathologically, dysregulation of NR1H3 contributes to atherosclerosis, fatty liver disease, and metabolic syndrome. Genetic variants in NR1H3 have been associated with autoimmune and neuroinflammatory disorders, including multiple sclerosis. Research using NR1H3 antibody supports studies in lipid regulation, transcriptional control, and metabolic disease mechanisms.

NR1H3 antibody is validated for western blotting, immunohistochemistry, and immunofluorescence to detect nuclear receptors and transcription factors. NSJ Bioreagents provides NR1H3 antibody reagents optimized for lipid metabolism, endocrinology, and transcriptional research.

Structurally, Oxysterols receptor LXR-alpha contains a DNA-binding zinc finger domain and a ligand-binding domain that mediates dimerization and transcriptional activation. This antibody supports analysis of NR1H3's regulatory functions in cholesterol and lipid homeostasis.

Application Notes

Optimal dilution of the NR1H3 antibody should be determined by the researcher.

Immunogen

E.coli-derived human NR1H3 recombinant protein (Position: D11-R401) was used as the immunogen for the NR1H3 antibody.

Storage

After reconstitution, the NR1H3 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Copyright © NSJ Bioreagents. All rights reserved.