abcam

ab24362

Anti-LXR alpha + LXR beta antibody

Key facts

Isotype	IgG
Host species	Goat
Storage buffer	pH: 7.3 Preservative: 0.02% Sodium azide Constituents: Tris buffered saline, 0.5% BSA
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human NR1H3. The exact immunogen used to generate this antibody is proprietary information. Database link Q13133
Purification technique	Affinity purification Immunogen
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from goat serum by ammonium sulphate precipitation followed by antigen affinity chromatography using the immunizing peptide.

Reactivity data

WB

Tested

Species	Human
Dilution info	1-3 µg/mL
Notes	1 hour primary incubation is recommended for this product.

Predicted

Species	Rat, Chicken, Cow, Pig, Xenopus laevis, Zebrafish
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	10 µg/mL
Notes	-

Predicted

Species	Rat, Chicken, Cow, Pig, Xenopus laevis, Zebrafish
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Predicted

Species	Rat, Chicken, Cow, Pig, Xenopus laevis, Zebrafish
Dilution info	-
Notes	-

Target data

See full target information NR1H3

Function	Nuclear receptor that exhibits a ligand-dependent transcriptional activation activity (PubMed:19481530, PubMed:25661920, PubMed:37478846). Interaction with retinoic acid receptor (RXR) shifts RXR from its role as a silent DNA-binding partner to an active ligand-binding subunit in mediating retinoid responses through target genes defined by LXRES (PubMed:37478846). LXRES are DR4-type response elements characterized by direct repeats of two similar hexanuclotide half-sites spaced by four nucleotides (By similarity). Plays an important role in the regulation of cholesterol homeostasis, regulating cholesterol uptake through MYLIP-dependent ubiquitination of LDLR, VLDLR and LRP8 (PubMed:19481530). Interplays functionally with RORA for the regulation of genes involved in liver metabolism (By similarity). Induces LPCAT3-dependent phospholipid remodeling in endoplasmic reticulum (ER) membranes of hepatocytes, driving SREBF1 processing and lipogenesis (By similarity). Via LPCAT3, triggers the incorporation of arachidonate into phosphatidylcholines of ER membranes, increasing membrane dynamics and enabling triacylglycerols transfer to nascent very low-density lipoprotein (VLDL) particles. Via LPCAT3 also counteracts lipid-induced ER stress response and inflammation, likely by modulating SRC kinase membrane compartmentalization and limiting the synthesis of lipid inflammatory mediators (By similarity).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Liver X Receptors (LXRs) including LXR alpha and LXR beta are nuclear receptors that function as transcription factors. These proteins with LXR alpha weighing approximately 51 kDa regulate the expression of genes involved in lipid metabolism and homeostasis. LXR alpha is mainly expressed in liver adipose tissue macrophages and the intestine whereas LXR beta shows a more ubiquitous expression pattern across tissues. Both receptors are activated by oxysterols which are oxidized derivatives of cholesterol.
Biological function summary	The liver X receptors play a significant role in regulating cholesterol and fatty acid homeostasis. LXR alpha and LXR beta do not function in isolation; they form heterodimers with Retinoid X Receptors (RXRs) to bind specific DNA sequences in target genes. Upon ligand activation they modulate the expression of ATP-binding

	cassette transporters like ABCA1 and ABCG1 which facilitate cholesterol efflux from cells to high-density lipoprotein (HDL) particles. The modulation of these genes is essential for maintaining cholesterol levels and preventing lipid accumulation in cells.
Pathways	LXRs integrate into the complex network of cholesterol and lipid metabolic pathways. They are key regulators of the cholesterol efflux pathway impacting the homeostasis of cholesterol through their interaction with RXR. In addition they influence the inflammatory response pathways by modulating the expression of inflammatory cytokines in macrophages. This function positions LXRs at the intersection of lipid metabolism and immune responses interlinking with proteins such as peroxisome proliferator-activated receptors (PPARs) that also play a role in these pathways.
Associated diseases and disorders	LXRs have been linked to conditions such as atherosclerosis and metabolic syndrome. By regulating cholesterol homeostasis LXRs contribute to plaque formation in arteries an important feature of atherosclerosis. Furthermore their role in inflammation suggests LXRs also influence metabolic syndrome and its related disorders. In these contexts LXRs interact with proteins like apolipoprotein E (ApoE) which is vital for cholesterol transport and clearance and C-reactive protein (CRP) which is involved in the inflammatory response. This connection highlights their potential as therapeutic targets in these diseases.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

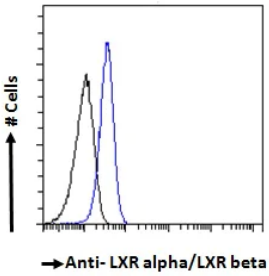
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

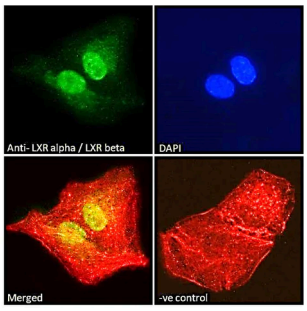
3 product images



Flow Cytometry (Intracellular) - Anti-LXR alpha + LXR beta antibody (ab24362)

LXR alpha + LXR beta Flow Cytometry (Intracellular) staining using goat Anti-LXR alpha + LXR beta antibody

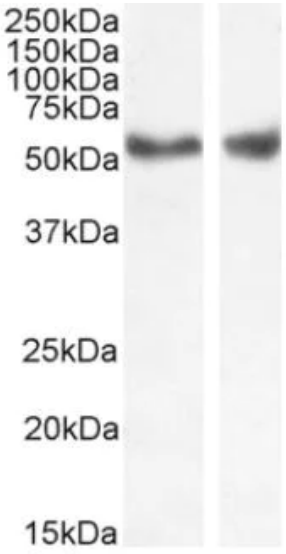
Flow cytometric analysis of paraformaldehyde fixed A549 cells (blue line), permeabilized with 0.5% Triton, followed by Alexa Fluor 488 secondary antibody (1ug/ml). IgG control: Unimmunized goat IgG (black line) followed by Alexa Fluor 488 secondary antibody.



Immunocytochemistry/ Immunofluorescence - Anti-LXR alpha + LXR beta antibody (ab24362)

LXR alpha + LXR beta Immunocytochemistry/ Immunofluorescence staining using goat Anti-LXR alpha + LXR beta antibody

Immunocytochemical/Immunofluorescent analysis of paraformaldehyde-fixed, 0.15% triton permeabilized A549 cells labelling LXR alpha + LXR beta with ab24362 at 10µg/ml, followed by Alexa Fluor 488 secondary antibody at 2ug/ml. Actin filaments were stained with phalloidin (red) and the nuclear stain is DAPI (blue).
Negative control: Unimmunized goat IgG (10ug/ml) followed by Alexa Fluor 488 secondary antibody (2ug/ml).



Western blot - Anti-LXR alpha + LXR beta antibody (ab24362)

All lanes:
Western blot - Anti-LXR alpha + LXR beta antibody (ab24362) at 1 µg/mL

Lane 1:
Human liver lysate in RIPA buffer at 35 µg

Lane 2:
Human kidney lysate in RIPA buffer at 35 µg

Developed using the ECL technique.

Predicted band size: 51 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.