

LXR α / β (S-20): sc-1000

BACKGROUND

Retinoids are metabolites of vitamin A (retinol) and are believed to represent important signaling molecules during vertebrate development and tissue differentiation. The cooperation of liver X receptors (LXRs) α and β and retinoic X receptor (RXR) modulate the expression of several genes involved in lipid metabolism in hepatocyte and macrophages. RXR is the receptor for 9-*cis* retinoic acid and dimerizes with VDR, TR, PPAR and several novel receptors including liver X receptors LXR α (also referred to as RLD-1), LXR β and FXR. FXR and LXR fall into a category of proteins termed "orphan receptors" because of their lack of a defined function, and in the case of LXR, the lack of a defined ligand. Both LXR/RXR and FXR/RXR heterodimers retain their responsiveness to 9-*cis* retinoic acid. LXR α and LXR β share considerable sequence homology and several functions, respond to the same endogenous and synthetic ligands and play critical roles in maintaining lipid homeostasis. LXR β is ubiquitously expressed and enriched in tissues of neuronal and endocrine origin.

CHROMOSOMAL LOCATION

Genetic locus: NR1H3 (human) mapping to 11p11.2, NR1H2 (human) mapping to 19q13.33; Nr1h3 (mouse) mapping to 2 E1, Nr1h2 (mouse) mapping to 7 B4.

SOURCE

LXR α / β (S-20) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping near the C-terminus of LXR β of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-1000 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-1000 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

LXR α / β (S-20) is recommended for detection of LXR α and LXR β of mouse, rat, human, chicken and *Xenopus laevis* origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

LXR α / β (S-20) is also recommended for detection of LXR α and LXR β in additional species, including equine, canine, bovine, porcine and avian.

LXR α / β (S-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

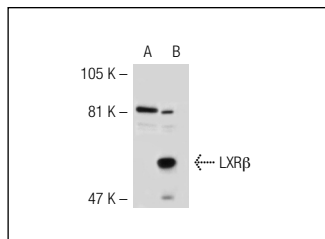
Molecular Weight of LXR α /LXR β : 50/56 kDa.

Positive Controls: LXR β (h): 293T Lysate: sc-112157, HeLa whole cell lysate: sc-2200 or mouse liver extract: sc-2256.

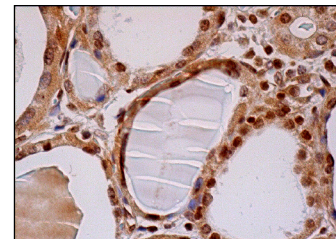
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



LXR α / β (S-20): sc-1000. Western blot analysis of LXR β expression in non-transfected: sc-117752 (A) and human LXR β transfected: sc-112157 (B) 293T whole cell lysates.



LXR α / β (S-20): sc-1000. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing nuclear and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Cha, J.Y., et al. 2007. The liver X receptor (LXR) and hepatic lipogenesis. The carbohydrate-response element-binding protein is a target gene of LXR. *J. Biol. Chem.* 282: 743-751.
2. Herzog, B., et al. 2007. The nuclear receptor cofactor, receptor-interacting protein 140, is required for the regulation of hepatic lipid and glucose metabolism by liver x receptor. *Mol. Endocrinol.* 21: 2687-2697.
3. Rébé, C., et al. 2009. Induction of transglutaminase 2 by a liver X receptor/retinoic acid receptor α pathway increases the clearance of apoptotic cells by human macrophages. *Circ. Res.* 105: 393-401.
4. Matsumoto, S., et al. 2009. Liver X receptor- α regulates proopiomelanocortin (POMC) gene transcription in the pituitary. *Mol. Endocrinol.* 23: 47-60.
5. Elali, A., et al. 2011. Liver X receptor activation enhances blood-brain barrier integrity in the ischemic brain and increases the abundance of ATP-binding cassette transporters ABCB1 and ABCC1 on brain capillary cells. *Brain Pathol.* 22: 175-187.
6. Shen, Q., et al. 2011. Liver X receptor-retinoid X receptor (LXR-RXR) heterodimer cistrome reveals coordination of LXR and AP1 signaling in keratinocytes. *J. Biol. Chem.* 286: 14554-14563.
7. Spyridon, M., et al. 2011. LXR as a novel antithrombotic target. *Blood* 117: 5751-5761.

RESEARCH USE

For research use only, not for use in diagnostic procedures.



Try **LXR α / β (H-7): sc-377260** or **LXR α / β (G-10): sc-271064**, our highly recommended monoclonal alternatives to LXR α / β (S-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **LXR α / β (H-7): sc-377260**.