

LXR α / β (C-20): sc-1591

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 (LXRs), also referred to as RLD-1, 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.

REFERENCES

1. Mangelsdorf, D.J., et al. 1994. The Retinoids: Biology, Chemistry, and Medicine, 2nd Edition. Sporn, M.B., et al, eds. New York: Raven Press, Ltd., 314-349.
2. Bhat, M.K., et al. 1994. Phosphorylation enhances the target gene sequence-dependent dimerization of thyroid hormone receptor with retinoid X receptor. Proc. Natl. Acad. Sci. USA 91: 7927-7931.
3. Song, C., et al. 1994. Ubiquitous receptor: a receptor that modulates gene activation by retinoic acid and thyroid hormone receptors. Proc. Natl. Acad. Sci. USA 91: 10809-10813.
4. Zechel, C., et al. 1994. The dimerization interfaces formed between the DNA binding domains of RXR, RAR and TR determine the binding specificity and polarity of the full-length receptors to direct repeats. EMBO J. 13: 1425-1433.

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 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at 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-1591 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-1591 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

LXR α / β (C-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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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

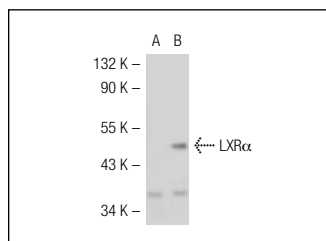
LXR α / β (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of LXR α : 50 kDa.

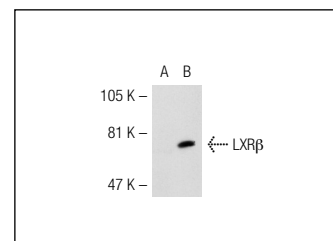
Molecular Weight of LXR β : 56 kDa

Positive Controls: LXR α (m): 293T Lysate: sc-127110, LXR β (h): 293T Lysate: sc-112157 or mouse liver extract: sc-2256.

DATA



LXR α / β (C-20): sc-1591. Western blot analysis of LXR α expression in non-transfected: sc-117752 (A) and mouse LXR α transfected: sc-127110 (B) 293T whole cell lysates.



LXR α / β (C-20): sc-1591. 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.

SELECT PRODUCT CITATIONS

1. Schwartz, K., et al. 2000. ABC1 gene expression and apoA-I-mediated cholesterol efflux are regulated by LXR. Biochem. Biophys. Res. Commun. 274: 794-802.
2. Beaudet, M.J., et al. 2005. The CYP2B2 phenobarbital response unit contains binding sites for hepatocyte nuclear factor 4, PBX-PREP1, the thyroid hormone receptor β and the liver X receptor. Biochem J. 388: 407-418.

STORAGE

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



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 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see LXR α / β (H-7): sc-377260.