

## LXR $\alpha$ (L-17): sc-34386

### 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)  $\alpha$  and  $\beta$  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 $\alpha$  and LXR $\beta$  share considerable sequence homology and several functions, respond to the same endogenous and synthetic ligands and play critical roles in maintaining lipid homeostasis. LXR $\beta$  is ubiquitously expressed and enriched in tissues of neuronal and endocrine origin.

### REFERENCES

- Mangelsdorf, D.J., et al. 1994. The Retinoids: Biology, Chemistry, and Medicine, 2nd Edition. In Sporn, M.B., et al, eds. New York: Raven Press, Ltd., 314-349.
- 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.
- 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.
- 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.
- Mangelsdorf, D.J., et al. 1995. The nuclear receptor superfamily: the second decade. Cell 83: 835-839.
- Mangelsdorf, D.J., et al. 1995. The RXR heterodimers and orphan receptors. Cell 83: 841-850.
- Willy, P.J., et al. 1995. LXR, a nuclear receptor that defines a distinct retinoid response pathway. Genes Dev. 9: 1033-1045.
- Leblanc, B.P., et al. 1995. 9-*cis* retinoic acid signaling: changing partners causes some excitement. Genes Dev. 9: 1811-1816.
- Seol, W., et al. 1995. Isolation of proteins that interact specifically with the retinoid X receptor: two novel orphan receptors. Mol. Endocrinol. 9: 72-85.

### CHROMOSOMAL LOCATION

Genetic locus: NR1H3 (human) mapping to 11q11.2; Nr1h3 (mouse) mapping to 2 E1.

### SOURCE

LXR $\alpha$  (L-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of LXR $\alpha$  of human origin.

### PRODUCT

Each vial contains 200  $\mu$ 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-34386 X, 200  $\mu$ g/0.1 ml.

Blocking peptide available for competition studies, sc-34386 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

LXR $\alpha$  (L-17) is recommended for detection of LXR $\alpha$  of human and, to a lesser extent, mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

Suitable for use as control antibody for LXR $\alpha$  siRNA (h): sc-38828, LXR $\alpha$  siRNA (m): sc-38829, LXR $\alpha$  shRNA Plasmid (h): sc-38828-SH, LXR $\alpha$  shRNA Plasmid (m): sc-38829-SH, LXR $\alpha$  shRNA (h) Lentiviral Particles: sc-38828-V and LXR $\alpha$  shRNA (m) Lentiviral Particles: sc-38829-V.

LXR $\alpha$  (L-17) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of LXR $\alpha$ : 50 kDa.

### RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

### STORAGE

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

### RESEARCH USE

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

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.



Try LXR $\alpha$ / $\beta$  (H-7): sc-377260 or LXR $\alpha$ / $\beta$  (G-10): sc-271064, our highly recommended monoclonal alternatives to LXR $\alpha$  (L-17). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see LXR $\alpha$ / $\beta$  (H-7): sc-377260.