SANTA CRUZ BIOTECHNOLOGY, INC.

LXRα/β (G-10): sc-271064

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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 LXRα (also referred to as RLD-1), LXRβ 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. LXRα and LXRβ share considerable sequence homology and several functions, respond to the same endogenous and synthetic ligands and play critical roles in maintaining lipid homeostasis. LXRβ is ubiquitously expressed and enriched in tissues of neuronal and endocrine origin.

REFERENCES

1. 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.
2. 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.

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

LXRα/β (G-10) is a mouse monoclonal antibody raised against amino acids 301-444 mapping near the C-terminus of LXRα of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain 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-271064 X, 200 µg/0.1 ml.

LXRα/β (G-10) is available conjugated to agarose (sc-271064 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271064 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271064 PE), fluorescein (sc-271064 FITC), Alexa Fluor® 488 (sc-271064 AF488), Alexa Fluor® 546 (sc-271064 AF546), Alexa Fluor® 594 (sc-271064 AF594) or Alexa Fluor® 647 (sc-271064 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271064 AF680) or Alexa Fluor® 790 (sc-271064 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

LXRα/β (G-10) is recommended for detection of LXRα and LXRβ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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).

LXRα/β (G-10) is also recommended for detection of LXRα and LXRβ in additional species, including equine, canine, bovine and porcine.

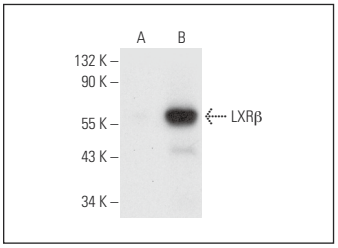
LXRα/β (G-10) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of LXRα: 50 kDa.

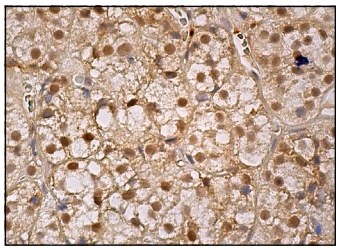
Molecular Weight of LXRβ: 56 kDa.

Positive Controls: LXRβ (h2): 293T Lysate: sc-116107, mouse liver extract: sc-2256 or HeLa whole cell lysate: sc-2200.

DATA



LXRα/β (G-10): sc-271064. Western blot analysis of LXRβ expression in non-transfected: sc-117752 (**A**) and human LXRβ transfected: sc-116107 (**B**) 293T whole cell lysates.



LXRα/β (G-10): sc-271064. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing nuclear and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Yang, H.Y., et al. 2015. Angiotensin-(1-7) stimulates cholesterol efflux from Angiotensin II-treated cholesterol-loaded THP-1 macrophages through the suppression of p38 and c-Jun N-terminal kinase signaling. Mol. Med. Rep. 12: 1387-1392.
2. Seidu, T., et al. 2021. DHT causes liver steatosis via transcriptional regulation of SCAP in normal weight female mice. J. Endocrinol. 250: 49-65.
3. Dong, Z., et al. 2022. Hepatic reduction in cholesterol 25-hydroxylase aggravates diet-induced steatosis. Cell. Mol. Gastroenterol. Hepatol. 13: 1161-1179.
4. Xie, J., et al. 2023. QiShenYiQi pill inhibits atherosclerosis by promoting reverse cholesterol transport PPARγ-LXRα/β-ABCA1 pathway. J. Ethnopharmacol. 315: 116684.

RESEARCH USE

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