SANTA CRUZ BIOTECHNOLOGY, INC.

PXR (N-16): sc-9690

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Steroid hormones function as signaling molecules by diffusing into cells and interacting with specific intracellular receptors to regulate gene expression. This superfamily of receptors includes both steroid and nonsteroid receptors. Like many nonsteroid hormone receptors, PXR (Pregnane X Receptor) binds as a heterodimer with RXR to a DNA sequence typical of a nonsteroid hormone receptor; however, PXR is activated by several steroids, such as naturally occurring pregnanes and synthetic glucocorticoids and antiglucocorticoids. PXR exists as two alternatively spliced isoforms, PXR.1 and PXR.2. PXR is thought to define a novel steroid hormone signaling pathway that may account for some of the effects of synthetic glucocorticoids and antiglucocorticoids that are not mediated through the classical glucocorticoid receptor signaling pathway.

CHROMOSOMAL LOCATION

Genetic locus: PEX5 (human) mapping to 12p13.31, PEX5L (human) mapping to 3q26.33.

SOURCE

PXR (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of PXR of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-9690 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9690 X, 200 µg/0.1 ml.

APPLICATIONS

PXR (N-16) is recommended for detection of PXR.1 and PXR.2 of human 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 PXR siRNA (h): sc-44057, PXR shRNA Plasmid (h): sc-44057-SH and PXR shRNA (h) Lentiviral Particles: sc-44057-V.

PXR (N-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of PXR: 50 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226 or Hep G2 cell lysate: sc-2227.

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.

SELECT PRODUCT CITATIONS

1. Zhang, J., et al. 2001. The human pregnane X receptor: genomic structure and identification and functional characterization of natural allelic variants. Pharmacogenetics 11: 555-572.
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3. Ostberg, T., et al. 2002. Identification of residues in the PXR ligand binding domain critical for species specific and constitutive activation. Eur. J. Biochem. 269: 4896-4904.
4. Iwahori, T., et al. 2003. CYP3A4 inducible model for *in vitro* analysis of human drug metabolism using a bioartificial liver. Hepatology 37: 665-673.
5. Pascussi, J.M., et al. 2005. Possible involvement of pregnane X receptor-enhanced CYP24 expression in drug-induced osteomalacia. J. Clin. Invest. 115: 177-186.
6. Ichikawa, T., et al. 2006. Steroid and xenobiotic receptor SXR mediates vitamin K_2-activated transcription of extracellular matrix-related genes and collagen accumulation in osteoblastic cells. J. Biol. Chem. 281: 16927-16234.
7. Meyer zu Schwabedissen, H.E., et al. 2008. Interplay between the nuclear receptor pregnane X receptor and the uptake transporter organic anion transporter polypeptide 1A2 selectively enhances estrogen effects in breast cancer. Cancer Res. 68: 9338-9347.
8. Takagi, S., et al. 2008. Post-transcriptional regulation of human pregnane X receptor by micro-RNA affects the expression of cytochrome P450 3A4. J. Biol. Chem. 283: 9674-9680.
9. Fery, Y., et al. 2009. Technical pentabromodiphenyl ether and hexabromocyclododecane as activators of the pregnane-X-receptor (PXR). Toxicology 264: 45-51.
10. Vrzal, R., et al. 2011. Valproic acid augments vitamin D receptor-mediated induction of CYP24 by vitamin D_3: a possible cause of valproic acid-induced osteomalacia?. Toxicol. Lett. 200: 146-153.
11. Biswas, A., et al. 2011. Acetylation of pregnane X receptor protein determines selective function independent of ligand activation. Biochem. Biophys. Res. Commun. 406: 371-376.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.