

IRBP (N-21): sc-18596

BACKGROUND

Interphotoreceptor retinoid-binding protein (IRBP) is a retinoid and fatty acid binding protein expressed exclusively in the photoreceptor cells of the retina and pinealocytes of the pineal gland. The gene encoding human IRBP maps to chromosome 10q11.2. A putative *trans*-acting complex binds a *cis*-element in the IRBP promoter and fully activates transcription of the IRBP gene. Hypomethylation of cysteine residues in the IRBP promoters of bovine and murine photoreceptor cells permits expression of the IRBP gene. IRBP may be involved in shuttling retinoids between photoreceptors and the retinal pigment epithelium. IRBP exists as a glycoprotein with a four-fold repeat structure. Each 300 amino acid repeat contains one A and one B domain corresponding to the first 80 amino acids (A) and the other 220 amino acids (B). Along with S-antigen and opsin, the antigenic properties of IRBP induce posterior uveitis, which is characterized by the inflammation of the choroid and photoreceptor cell death.

REFERENCES

1. Bunt-Milam, A.H., et al. 1983. Immunocytochemical localization of two retinoid-binding proteins in vertebrate retina. *J. Cell Biol.* 97: 703-712.
2. van Veen, T., et al. 1986. Retinal photoreceptor neurons and pinealocytes accumulate mRNA for interphotoreceptor retinoid-binding protein (IRBP). *FEBS Lett.* 208: 133-137.
3. Broekhuysse, R.M., et al. 1986. Induction of experimental autoimmune uveoretinitis and pinealitis by IRBP. Comparison to uveoretinitis induced by S-antigen and opsin. *Curr. Eye Res.* 5: 231-240.
4. Liou, G.I., et al. 1987. Human interstitial retinol-binding protein (IRBP): cloning, partial sequence and chromosomal localization. *Somat. Cell Mol. Genet.* 13: 315-323.
5. Borst, D.E., et al. 1989. Interphoto-receptor retinoid-binding protein. Genecharacterization, protein repeat structure and its evolution. *J. Biol. Chem.* 264: 1115-1123.

CHROMOSOMAL LOCATION

Genetic locus: RBP3 (human) mapping to 10q11.22; Rbp3 (mouse) mapping to 14 B.

SOURCE

IRBP (N-21) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of IRBP 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-18596 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

IRBP (N-21) is recommended for detection of IRBP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

IRBP (N-21) is also recommended for detection of IRBP in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for IRBP siRNA (h): sc-40703, IRBP siRNA (m): sc-40704, IRBP shRNA Plasmid (h): sc-40703-SH, IRBP shRNA Plasmid (m): sc-40704-SH, IRBP shRNA (h) Lentiviral Particles: sc-40703-V and IRBP shRNA (m) Lentiviral Particles: sc-40704-V.

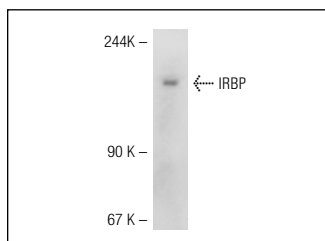
Molecular Weight of IRBP: 140 kDa.

Positive Controls: Y79 cell lysate: sc-2240 or mouse eye extract: sc-364241.

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™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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™ Mounting Medium: sc-24941.

DATA



IRBP (N-21): sc-18596. Western blot analysis of IRBP expression in mouse eye tissue extract.

RESEARCH USE

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

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Try **IRBP (A-12): sc-376225** or **IRBP (H-6): sc-390218**, our highly recommended monoclonal alternatives to IRBP (N-21).