

IRBP (m3): 293T Lysate: sc-121107

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 10q11.22. 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. Matsuo, T., et al. 1986. Immunological studies of uveitis. 3. Cell-mediated immunity to interphotoreceptor retinoid-binding protein. *Jpn. J. Ophthalmol.* 30: 487-494.
5. 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.
6. Borst, D.E., et al. 1989. Interphoto-receptor retinoid-binding protein. Gene characterization, protein repeat structure, and its evolution. *J. Biol. Chem.* 264: 1115-1123.
7. Porrello, K., et al. 1991. Detection of interphotoreceptor retinoid binding protein (IRBP) mRNA in human and cone dominant squirrel retinas by *in situ* hybridization. *J. Histochem. Cytochem.* 39: 171-176.
8. Lin, Z.Y., et al. 1997. Structure-function relationships in interphotoreceptor retinoid-binding protein (IRBP). *Mol. Vis.* 3: 17.
9. Nickerson, J.M., et al. 1998. Structure-function relationships in the four repeats of human interphotoreceptor retinoid-binding protein (IRBP). *Mol. Vis.* 4: 33.

CHROMOSOMAL LOCATION

Genetic locus: Rbp3 (mouse) mapping to 14 B.

PRODUCT

IRBP (m3): 293T Lysate represents a lysate of mouse IRBP transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

IRBP (m3): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive IRBP antibodies. Recommended use: 10-20 µl per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.