

# Retinal RX (H-7): sc-376837

## BACKGROUND

The homeobox DNA-binding domain is a 60 amino acid motif that is conserved among many species and functions to bind DNA via a helix-turn-helix structure, thereby playing a role in transcriptional regulation and the control of gene expression. Retinal RX, also known as RAX (retina and anterior neural fold homeobox), MCOP3 or RX, is a 346 amino acid protein that localizes to the nucleus and contains one OAR domain and one homeobox DNA-binding domain. Expressed in developing eye tissue, as well as in adult retina tissue, Retinal RX plays a crucial role in eye formation, specifically by regulating the specification and proliferation of retinal cells. Defects in the gene encoding Retinal RX are the cause of microphthalmia isolated type 3 (MCOP3), a heterogeneous disorder that is characterized by opacities of the cornea and lens and scarring of the retina and choroid.

## REFERENCES

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- Mikkola, I., et al. 2001. Superactivation of Pax-6-mediated transactivation from paired domain-binding sites by DNA-independent recruitment of different homeodomain proteins. *J. Biol. Chem.* 276: 4109-4118.
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- Lequeux, L., et al. 2008. Confirmation of RAX gene involvement in human anophthalmia. *Clin. Genet.* 74: 392-395.
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## CHROMOSOMAL LOCATION

Genetic locus: RAX (human) mapping to 18q21.32; Rax (mouse) mapping to 18 E1.

## SOURCE

Retinal RX (H-7) is a mouse monoclonal antibody raised against amino acids 1-120 mapping at the N-terminus of Retinal RX of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> 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-376837 X, 200 µg/0.1 ml.

## APPLICATIONS

Retinal RX (H-7) is recommended for detection of Retinal RX 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Retinal RX siRNA (h): sc-76390, Retinal RX siRNA (m): sc-76391, Retinal RX shRNA Plasmid (h): sc-76390-SH, Retinal RX shRNA Plasmid (m): sc-76391-SH, Retinal RX shRNA (h) Lentiviral Particles: sc-76390-V and Retinal RX shRNA (m) Lentiviral Particles: sc-76391-V.

Retinal RX (H-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of Retinal RX: 37 kDa.

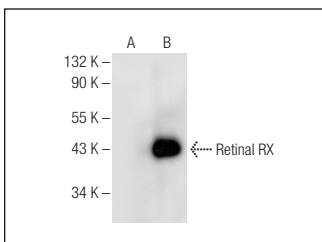
Molecular Weight (observed) of Retinal RX: 21-37 kDa.

Positive Controls: mouse eye extract: sc-364241 or Retinal RX (m): 293T Lysate: sc-123075.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

## DATA



Retinal RX (H-7): sc-376837. Western blot analysis of Retinal RX expression in non-transfected: sc-117752 (A) and mouse Retinal RX transfected: sc-123075 (B) 293T whole cell lysates.

## 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.