

# Pax-6 (H-295): sc-11357

## BACKGROUND

Pax genes contain paired domains with strong homology to genes in *Drosophila* which are involved in programming early development. Lesions in the Pax-6 gene accounts for most cases of aniridia, a congenital malformation of the eye, chiefly characterized by iris hypoplasia, which can cause blindness. Pax-6 is involved in other anterior segment malformations besides aniridia, such as Peters' anomaly, a major error in the embryonic development of the eye with corneal clouding with variable iridolenticulocorneal adhesions. The Pax-6 gene encodes a transcriptional regulator that recognizes target genes through its paired-type DNA-binding domain. The paired domain is composed of two distinct DNA-binding subdomains, the amino-terminal subdomain and the carboxy-terminal subdomain, which bind respective consensus DNA sequences. The human Pax-6 gene produces two alternatively spliced isoforms that have the distinct structure of the paired domain.

## CHROMOSOMAL LOCATION

Genetic locus: PAX6 (human) mapping to 11p13; Pax6 (mouse) mapping to 2 E3.

## SOURCE

Pax-6 (H-295) is a rabbit polyclonal antibody raised against amino acids 264-422 mapping at the C-terminus of Pax-6 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-11357 X, 200 µg/0.1 ml.

## APPLICATIONS

Pax-6 (H-295) is recommended for detection of Pax-6 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).

Pax-6 (H-295) is also recommended for detection of Pax-6 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Pax-6 siRNA (h): sc-36195, Pax-6 siRNA (m): sc-36196, Pax-6 shRNA Plasmid (h): sc-36195-SH, Pax-6 shRNA Plasmid (m): sc-36196-SH, Pax-6 shRNA (h) Lentiviral Particles: sc-36195-V and Pax-6 shRNA (m) Lentiviral Particles: sc-36196-V.

Pax-6 (H-295) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of Pax-6: 47 kDa.

Positive Controls: Y79 nuclear extract: sc-2126 or rat eye extract: sc-364805.

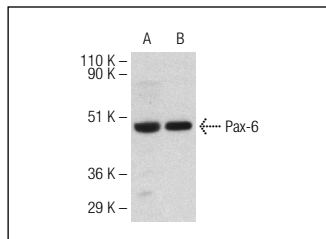
## RESEARCH USE

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

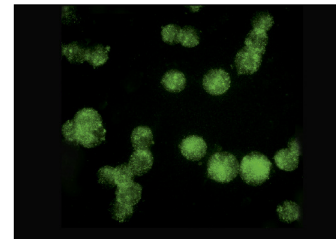
## STORAGE

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

## DATA



Pax-6 (H-295): sc-11357. Western blot analysis of Pax-6 expression in Y79 nuclear extract (A) and rat eye tissue extract (B).



Pax-6 (H-295): sc-11357. Immunofluorescence staining of methanol-fixed Y79 cells showing nuclear localization.

## SELECT PRODUCT CITATIONS

- Koch, H., et al. 1979. Diagnosis of acute gastrointestinal hemorrhages. *MMW Munch. Med. Wochenschr.* 121: 975-976.
- Wolf, L.V., et al. 2009. Identification of Pax-6-dependent gene regulatory networks in the mouse lens. *PLoS ONE* 4: e4159.
- Mollamohammadi, S., et al. 2009. A simple and efficient cryopreservation method for feeder-free dissociated human induced pluripotent stem cells and human embryonic stem cells. *Hum. Reprod.* 24: 2468-2476.
- Zhang, J., et al. 2010. Isoform- and dose-sensitive feedback interactions between paired box 6 gene and  $\delta$ -catenin in cell differentiation and death. *Exp. Cell Res.* 316: 1070-1081.
- Jezierski, A., et al. 2010. Probing stemness and neural commitment in human amniotic fluid cells. *Stem Cell Rev.* 6: 199-214.
- Gao, J., et al. 2011. Regulation of Pax6 by CTCF during induction of mouse ES cell differentiation. *PLoS ONE* 6: e20954.
- Shahbazi, E., et al. 2011. Electrospun nanofibrillar surfaces promote neuronal differentiation and function from human embryonic stem cells. *Tissue Eng. Part A* 17: 3021-3031.
- Pessac, B., et al. 2011. Hematopoietic progenitors express embryonic stem cell and germ layer genes. *C. R. Biol.* 334: 300-306.
- Wang, Z., et al. 2012. Notch signaling pathway regulates proliferation and differentiation of immortalized Müller cells under hypoxic conditions *in vitro*. *Neuroscience* 214: 171-180.

**MONOS**  
Satisfaction  
Guaranteed

Try **Pax-6 (PAX6): sc-81649** or **Pax-6 (AD2.35): sc-53108**, our highly recommended monoclonal alternatives to Pax-6 (H-295). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **Pax-6 (PAX6): sc-81649**.