

# Pax-6 (C-20): sc-7750

## 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 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide 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.

Blocking peptide available for competition studies, sc-7750 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-7750 X, 200 µg/0.1 ml.

## APPLICATIONS

Pax-6 (C-20) 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 (C-20) 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 (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

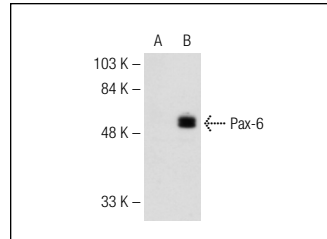
Molecular Weight of Pax-6: 47 kDa.

Positive Controls: Pax-6 (h): 293T Lysate: sc-110018, Y79 nuclear extract: sc-2126 or Y79 cell lysate: sc-2240.

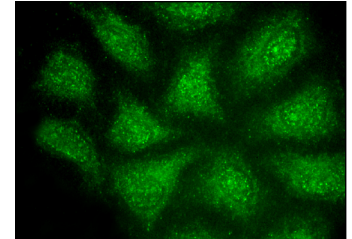
## STORAGE

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

## DATA



Pax-6 (C-20): sc-7750. Western blot analysis of Pax-6 expression in non-transfected: sc-117752 (A) and human Pax-6 transfected: sc-110018 (B) 293T whole cell lysates.



Pax-6 (C-20): sc-7750. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

## SELECT PRODUCT CITATIONS

1. Waclaw, R.R., et al. 2006. The zinc finger transcription factor Sp8 regulates the generation and diversity of olfactory bulb interneurons. *Neuron* 49: 503-516.
2. Waclaw, R.R., et al. 2006. The zinc finger transcription factor Sp8 regulates the generation and diversity of olfactory bulb interneurons. *Neuron* 49: 503-516.
3. Tripathi, R., et al. 2010. Interaction of Pax6 with SPARC and p53 in brain of mice indicates Smad3 dependent auto-regulation. *J. Mol. Neurosci.* 41: 397-403.
4. Lesser, M.P., et al. 2011. Sea urchin tube feet are photosensory organs that express a rhabdomeric-like opsin and PAX6. *Proc. Biol. Sci.* 278: 3371-3379.
5. Garcia, C.M., et al. 2011. The function of FGF signaling in the lens placode. *Dev. Biol.* 351: 176-185.
6. Mattotti, M., et al. 2012. Inducing functional radial glia-like progenitors from cortical astrocyte cultures using micropatterned PMMA. *Biomaterials* 33: 1759-1770.
7. Alvarez, Z., et al. 2013. The effect of the composition of PLA films and lactate release on glial and neuronal maturation and the maintenance of the neuronal progenitor niche. *Biomaterials* 34: 2221-2233.

## RESEARCH USE

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



Try **Pax-6 (PAX6): sc-81649** or **Pax-6 (AD2.35): sc-53108**, our highly recommended monoclonal alternatives to Pax-6 (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Pax-6 (PAX6): sc-81649**.