

# PAXX (E-4): sc-514359



The Power to Question

## BACKGROUND

Chromosome 9 consists of about 145 million bases and 4% of the human genome, encoding nearly 900 genes. Considered to play a role in gender determination, deletion of the distal portion of 9p can lead to development of male to female sex reversal, the phenotype of a female with a male X,Y genotype. Hereditary hemorrhagic telangiectasia, which is characterized by harmful vascular defects, is associated with the chromosome 9 gene-encoding Endoglin protein, ENG. Familial dysautonomia is also associated with chromosome 9 though through the gene IKBKAP. Notably, chromosome 9 encompasses the largest interferon family gene cluster. Chromosome 9 is partnered with chromosome 22 in the translocation leading to the aberrant production of Bcr-Abl fusion protein often found in leukemias.

## REFERENCES

- Humphray, S.J., et al. 2004. DNA sequence and analysis of human chromosome 9. *Nature* 429: 369-374.
- Coppo, P., et al. 2006. Bcr-Abl activates STAT3 via JAK and MEK pathways in human cells. *Br. J. Haematol.* 134: 171-179.
- Zheng, X., et al. 2006. Bcr and its mutants, the reciprocal t(9;22)-associated Abl/Bcr fusion proteins, differentially regulate the cytoskeleton and cell motility. *BMC Cancer* 7: 262.
- Burmeister, T., et al. 2007. Atypical Bcr-Abl mRNA transcripts in adult acute lymphoblastic leukemia. *Haematologica* 92: 1699-1702.
- Cottin, V., et al. 2007. Pulmonary vascular manifestations of hereditary hemorrhagic telangiectasia (Rendu-Osler disease). *Respiration* 74: 361-378.

## CHROMOSOMAL LOCATION

Genetic locus: PAXX (human) mapping to 9q34.3.

## SOURCE

PAXX (E-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 22-41 near the N-terminus of PAXX 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.

PAXX (E-4) is available conjugated to agarose (sc-514359 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514359 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514359 PE), fluorescein (sc-514359 FITC), Alexa Fluor® 488 (sc-514359 AF488), Alexa Fluor® 546 (sc-514359 AF546), Alexa Fluor® 594 (sc-514359 AF594) or Alexa Fluor® 647 (sc-514359 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-514359 AF680) or Alexa Fluor® 790 (sc-514359 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-514359 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

PAXX (E-4) is recommended for detection of PAXX of 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 PAXX siRNA (h): sc-92704, PAXX shRNA Plasmid (h): sc-92704-SH and PAXX shRNA (h) Lentiviral Particles: sc-92704-V.

Molecular Weight of PAXX: 22 kDa.

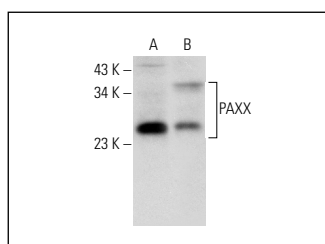
Positive Controls: Jurkat whole cell lysate: sc-2204, human tonsil tissue extract: sc-364263 or human liver extract: sc-363766.

## RECOMMENDED SUPPORT REAGENTS

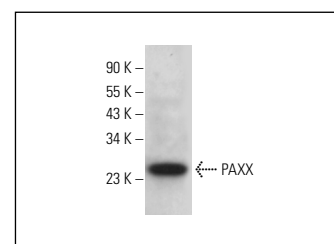
To ensure optimal results, the following support reagents are recommended:

- 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.
- Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
- 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



PAXX (E-4): sc-514359. Western blot analysis of PAXX expression in Jurkat whole cell lysate (A) and human liver tissue extract (B).



PAXX (E-4): sc-514359. Western blot analysis of PAXX expression in human tonsil tissue extract.

## SELECT PRODUCT CITATIONS

- Craxton, A., et al. 2018. PAXX and its paralogs synergistically direct DNA polymerase λ activity in DNA repair. *Nat. Commun.* 9: 3877.
- Nicolai, S., et al. 2020. ZNF281 is recruited on DNA breaks to facilitate DNA repair by non-homologous end joining. *Oncogene* 39: 754-766.

## 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.