SANTA CRUZ BIOTECHNOLOGY, INC.

XKR4 (T-17): sc-98208

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Kell and XK are two covalently linked plasma membrane proteins that constitute the Kell blood group system, a group of antigens on the surface of red blood cells that are important determinants of blood type and targets for autoimmune or alloimmune diseases. XK is a 444 amino acid protein that spans the membrane 10 times and carries the ubiquitous antigen, Kx, which determines blood type. The XK (X-linked Kx blood group)-related gene family are homologs of XK. XKR4 (XK-related protein 4) is a 650 amino acid multipass membrane protein that likely is a component of the XK/Kell complex of the Kell blood group system. The gene encoding XKR4 maps to human chromosome 8, which is made up of nearly 146 million bases and encodes about 800 genes. Single nucleotide polymorphisms (SNPs) of the XKR4 gene are associated with iloperidone efficacy, a antipsychotic drug that is used to treat schizophrenic patients.

REFERENCES

1. Lee, S., et al. 2000. Functional and structural aspects of the Kell blood group system. Transfus. Med. Rev. 14: 93-103.
2. Lee, S., et al. 2000. The Kell blood group system: Kell and XK membrane proteins. Semin. Hematol. 37: 113-121.
3. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 314850. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
4. Singleton, B.K., et al. 2003. McLeod syndrome resulting from a novel XK mutation. Br. J. Haematol. 122: 682-685.
5. Feder, M. and Bujnicki, J.M. 2005. Identification of a new family of putative PD-(D/E)XK nucleases with unusual phylogenomic distribution and a new type of the active site. BMC Genomics 6: 21.
6. Pu, J.J., et al. 2005. Onset of expression of the components of the Kell blood group complex. Transfusion 45: 969-974.
7. Starling, A., et al. 2005. A family with McLeod syndrome and calpainopathy with clinically overlapping diseases. Neurology 65: 1832-1833.

CHROMOSOMAL LOCATION

Genetic locus: XKR4 (human) mapping to 8q12.1; Xkr4 (mouse) mapping to 1 A1.

SOURCE

XKR4 (T-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of XKR4 of human origin.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

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-98208 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

XKR4 (T-17) is recommended for detection of XKR4 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).

XKR4 (T-17) is also recommended for detection of XKR4 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for XKR4 siRNA (h): sc-77644, XKR4 siRNA (m): sc-155373, XKR4 shRNA Plasmid (h): sc-77644-SH, XKR4 shRNA Plasmid (m): sc-155373-SH, XKR4 shRNA (h) Lentiviral Particles: sc-77644-V and XKR4 shRNA (m) Lentiviral Particles: sc-155373-V.

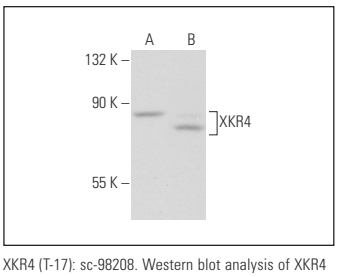
Molecular Weight of XKR4: 72 kDa.

Positive Controls: IMR-32 cell lysate: sc-2409 or KNRK whole cell lysate: sc-2214.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



XKR4 (T-17): sc-98208. Western blot analysis of XKR4 expression in IMR-32 (**A**) and KNRK (**B**) whole cell lysates.

RESEARCH USE

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