

XK (C-17): sc-50198

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. XK also plays a role in the sodium-dependent membrane transport of oligopeptides and neutral amino acids. XK is expressed at high levels in brain, heart, skeletal muscle and pancreas. Defects in the XK gene cause McLeod syndrome (MLS), an X-linked multisystem disorder characterized by abnormalities in neuromuscular and hematopoietic system such as acanthocytic red blood cells and late-onset forms of muscular dystrophy with nerve abnormalities.

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. *Sem. 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. Danek, A., et al. 2005. Neuroacanthocytosis: new developments in a neglected group of dementing disorders. *J. Neurol. Sci.* 229-230: 171-186.
6. 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.
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CHROMOSOMAL LOCATION

Genetic locus: XK (human) mapping to Xp21.1.

SOURCE

XK (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of XK 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-50198 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

XK (C-17) is recommended for detection of XK of 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), immunohistochemistry (including paraffin-embedded sections) (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 XK siRNA (h): sc-61807, XK shRNA Plasmid (h): sc-61807-SH and XK shRNA (h) Lentiviral Particles: sc-61807-V.

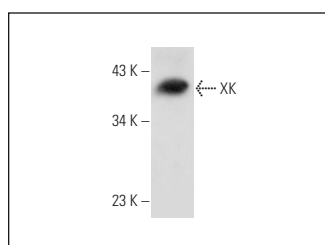
Molecular Weight of XK: 40 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

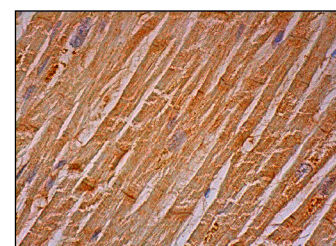
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



XK (C-17): sc-50198. Western blot analysis of XK expression in HeLa whole cell lysate.



XK (C-17): sc-50198. Immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing cytoplasmic and membrane staining of myocytes.

RESEARCH USE

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

PROTOCOLS

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