

Kell (N-17): sc-27867

BACKGROUND

The KEL (CD238) gene encodes a type II transmembrane endopeptidase, Kell, that shares a consensus sequence with a large family of zinc-dependent endopeptidases. The Kell blood group protein is expressed primarily in the erythroid tissues and testis and with weaker expression in a large number of other tissues such as brain and lymphoid tissues. Immunohistochemistry reveals human Kell protein is localized to the Sertoli cells of the testis and the follicular dendritic cells of the spleen and tonsil. Kell is one of the major human surface antigens on red blood cells where it is linked by a single disulfide bond to XK. The absence of XK, as occurs in the McLeod phenotype, is associated with a set of clinical symptoms that include nerve and muscle disorders and red cell acanthocytosis.

REFERENCES

1. Lee, S., et al. 1991. Molecular cloning and primary structure of Kell blood group protein. *Proc. Natl. Acad. Sci. USA* 88: 6353-6357.
2. Lee, S., et al. 1995. Organization of the gene encoding the human Kell blood group protein. *Blood* 85: 1364-1370.
3. Camara-Clayette, V., et al. 2001. Transcriptional regulation of the KEL gene and Kell protein expression in erythroid and non-erythroid cells. *Biochem. J.* 356: 171-180.
4. Yu, L.C., et al. 2001. Molecular basis of the Kell-null phenotype: a mutation at the splice site of human KEL gene abolishes the expression of Kell blood group antigens. *J. Biol. Chem.* 276: 10247-10252.
5. Lee, S., et al. 2001. Molecular defects underlying the Kell null phenotype. *J. Biol. Chem.* 276: 27281-27289.
6. Wagner, T., et al. 2002. Kell expression on myeloid progenitor cells. *Leuk. Lymphoma* 43: 479-485.

CHROMOSOMAL LOCATION

Genetic locus: KEL (human) mapping to 7q34.

SOURCE

Kell (N-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of Kell 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-27867 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.

PROTOCOLS

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

APPLICATIONS

Kell (N-17) is recommended for detection of Kell 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Kell (N-17) is also recommended for detection of Kell in additional species, including bovine.

Suitable for use as control antibody for Kell siRNA (h): sc-72103, Kell shRNA Plasmid (h): sc-72103-SH and Kell shRNA (h) Lentiviral Particles: sc-72103-V.

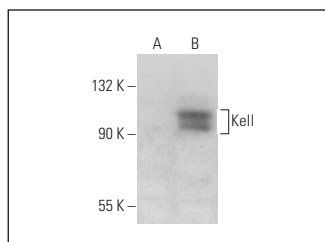
Molecular Weight of Kell: 120 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Kell (h3): 293T Lysate: sc-170451 or Jurkat whole cell lysate: sc-2204.

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



Kell (N-17): sc-27867. Western blot analysis of Kell expression in non-transfected: sc-117752 (A) and human Kell transfected: sc-170451 (B) 293T whole cell lysates.

RESEARCH USE

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