

# Kell (C-10): sc-271070

## 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

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- Yu, L.C., Twu, Y.C., Chang, C.Y. and Lin, M. 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.
- Lee, S., Russo, D.C., Reiner, A.P., Lee, J.H., Sy, M.Y., Telen, M.J., Judd, W.J., Simon, P., Rodrigues, M.J., Chabert, T., Poole, J., Jovanovic-Szrentic, S., Levene, C., Yahalom, V. and Redman, C.M. 2001. Molecular defects underlying the Kell null phenotype. *J. Biol. Chem.* 276: 27281-27289.
- Wagner, T., Lanzer, G. and Geissler, K. 2002. Kell expression on myeloid progenitor cells. *Leuk. Lymphoma* 43: 479-485.

## CHROMOSOMAL LOCATION

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

## SOURCE

Kell (C-10) is a mouse monoclonal antibody raised against amino acids 81-380 mapping near the N-terminus of Kell of human origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## STORAGE

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

## APPLICATIONS

Kell (C-10) is recommended for detection of Kell 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 Kell siRNA (h): sc-72103, Kell shRNA Plasmid (h): sc-72103-SH and Kell shRNA (h) Lentiviral Particles: sc-72103-V.

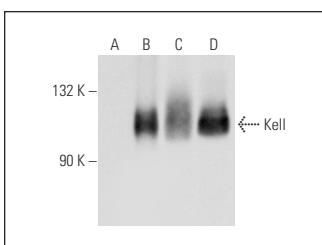
Molecular Weight of Kell: 120 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Daudi cell lysate: sc-2415 or Kell (h3): 293T Lysate: sc-170451.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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



Kell (C-10): sc-271070. Western blot analysis of Kell expression in non-transfected 293T: sc-117752 (A), human Kell transfected 293T: sc-170451 (B), K-562 (C) and Daudi (D) whole cell lysates.

## SELECT PRODUCT CITATIONS

- Huang, N.J., Pishesha, N., Mukherjee, J., Zhang, S., Deshycka, R., Sudaryo, V., Dong, M., Shoemaker, C.B. and Lodish, H.F. 2017. Genetically engineered red cells expressing single domain camelid antibodies confer long-term protection against botulinum neurotoxin. *Nat. Commun.* 8: 423.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.