

# Kell (3H571): sc-71465

## 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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3. Camara-Clayette, V., Rahuel, C., Lopez, C., Hattab, C., Verkarre, V., Bertrand, O. and Cartron, J.P. 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., 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.
5. 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-Srzentic, S., Levene, C., Yahalom, V. and Redman, C.M. 2001. Molecular defects underlying the Kell null phenotype. *J. Biol. Chem.* 276: 27281-27289.
6. 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 (3H571) is a mouse monoclonal antibody raised against erythrocytes 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 (3H571) is recommended for detection of the Kell blood group antigen K<sub>pb</sub>c and K<sub>p</sub> (a+b-c+) and K<sub>p</sub> (a-b-c+) erythrocytes of human origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)]; non cross-reactive with K<sub>o</sub> erythrocytes.

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, Jurkat whole cell lysate: sc-2204 or HeLa nuclear extract: sc-2120.

## RECOMMENDED SUPPORT REAGENTS

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

## 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.