

Kell (h3): 293T Lysate: sc-170451

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., Zambas, E.D., Marsh, W.L. and Redman, C.M. 1991. Molecular cloning and primary structure of Kell blood group protein. *Proc. Natl. Acad. Sci. USA* 88: 6353-6357.
2. Lee, S., Zambas, E., Green, E.D. and Redman, C. 1995. Organization of the gene encoding the human Kell blood group protein. *Blood* 85: 1364-1370.
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-Szentic, 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.

PRODUCT

Kell (h3): 293T Lysate represents a lysate of human Kell transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Kell (h3): 293T Lysate is suitable as a Western Blotting positive control for human reactive Kell antibodies.

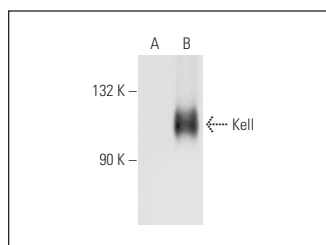
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Kell (C-10): sc-271070 is recommended as a positive control antibody for Western Blot analysis of enhanced human Kell expression in Kell transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

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.

DATA



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

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

RESEARCH USE

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

PROTOCOLS

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