SANTA CRUZ BIOTECHNOLOGY, INC.

Kell (E-20): sc-27871

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 in a near-equal amount in testis, 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 and the Kell antigen alleles localize to chromosome 7q33. On red cells, Kell protein is linked by a single disulfide bond to XK whose absence, 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. 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.

7. Wagner, T., et al. 2002. Kell expression on myeloid progenitor cells. Leuk. Lymphoma 43: 479-485.

8.SWISS-PROT/TrEMBL (P23276). World Wide Web URL: http://www.expasy.ch/sprot/sprot-top.html

SOURCE

Kell (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of Kell of mouse 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-27871 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

Kell (E-20) is recommended for detection of Kell (also designated as CD238) of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

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) 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.

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.