

FLVCR (C-16): sc-55646

BACKGROUND

FLVCR is a 555 amino acid protein encoded by the human gene FLVCR. It is a multi-pass membrane bound protein that belongs to the major facilitator superfamily, feline leukemia virus subgroup C receptor (TC 2.A.1.28.1) family. FLVCR is responsible for the exportation of cytoplasmic heme groups. It is believed that it may protect developing erythroid cells from heme toxicity. Expression of FLVCR in cells will cause susceptibility to FeLV-C (feline leukemia virus subgroup C) *in vitro*. FLVCR is found in all hematopoietic tissues, including peripheral blood lymphocytes and fetal liver, and some expression is found in pancreas and kidney. It is downregulated in hemopoietic progenitor cells undergoing differentiation and hemoglobinization.

REFERENCES

1. Quigley, J.G., Burns, C.C., Anderson, M.M., Lynch, E.D., Sabo, K.M., Overbaugh, J. and Abkowitz, J.L. 2000. Cloning of the cellular receptor for feline leukemia virus subgroup C (FeLV-C), a retrovirus that induces red cell aplasia. *Blood* 95: 1093-1099.
2. Lipovich, L., Hughes, A.L., King, M.C., Abkowitz, J.L. and Quigley, J.G. 2002. Genomic structure and evolutionary context of the human feline leukemia virus subgroup C receptor (hFLVCR) gene: evidence for block duplications and *de novo* gene formation within duplicons of the hFLVCR locus. *Gene* 286: 203-213.
3. Quigley, J.G., Yang, Z., Worthington, M.T., Phillips, J.D., Sabo, K.M., Sabath, D.E., Berg, C.L., Sassa, S., Wood, B.L. and Abkowitz, J.L. 2004. Identification of a human heme exporter that is essential for erythropoiesis. *Cell* 118: 757-766.
4. Lucas, M.L., Seidel, N.E., Porada, C.D., Quigley, J.G., Anderson, S.M., Malech, H.L., Abkowitz, J.L., Zanjani, E.D. and Bodine, D.M. 2005. Improved transduction of human sheep repopulating cells by retrovirus vectors pseudotyped with feline leukemia virus type C or RD114 envelopes. *Blood* 106: 51-58.
5. Quigley, J.G., Gazda, H., Yang, Z., Ball, S., Sieff, C.A. and Abkowitz, J.L. 2005. Investigation of a putative role for FLVCR, a cytoplasmic heme exporter, in Diamond-Blackfan anemia. *Blood Cells Mol. Dis.* 35: 189-192.
6. Brown, J.K., Fung, C. and Taylor, C.S. 2006. Comprehensive mapping of receptor-functioning domains in feline leukemia virus subgroup C receptor FLVCR1. *J. Virol.* 80: 1742-1751.
7. Rey, M.A., Prasad, R. and Taylor, C.S. 2007. The C domain in the surface envelope glycoprotein of subgroup C feline leukemia virus is a second receptor-binding domain. *Virology* 370: 273-284.

CHROMOSOMAL LOCATION

Genetic locus: FLVCR1 (human) mapping to 1q32.3.

SOURCE

FLVCR (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of FLVCR 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-55646 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FLVCR (C-16) is recommended for detection of FLVCR of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 FLVCR siRNA (h): sc-62324, FLVCR shRNA Plasmid (h): sc-62324-SH and FLVCR shRNA (h) Lentiviral Particles: sc-62324-V.

Molecular Weight of glycosylated FLVCR form: 72 kDa.

Molecular Weight of non-glycosylated FLVCR form: 55 kDa.

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.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. 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 or our catalog for detailed protocols and support products.



MONOS
Satisfaction
Guaranteed

Try **FLVCR (C-4): sc-390100**, our highly recommended monoclonal alternative to FLVCR (C-16).