SANTA CRUZ BIOTECHNOLOGY, INC.

FLVCR (C-4): sc-390100

The Power to Question

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 down-regulated in haemopoietic progenitor cells undergoing differentiation and hemoglobinization.

CHROMOSOMAL LOCATION

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

SOURCE

FLVCR (C-4) is a mouse monoclonal antibody raised against amino acids 1-120 mapping at the N-terminus of FLVCR of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FLVCR (C-4) is available conjugated to agarose (sc-390100 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390100 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390100 PE), fluorescein (sc-390100 FITC), Alexa Fluor® 488 (sc-390100 AF488), Alexa Fluor® 546 (sc-390100 AF546), Alexa Fluor® 594 (sc-390100 AF594) or Alexa Fluor® 647 (sc-390100 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390100 AF680) or Alexa Fluor® 790 (sc-390100 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

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

APPLICATIONS

FLVCR (C-4) is recommended for detection of FLVCR 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 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.

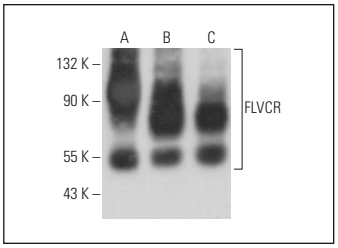
Molecular Weight of non-glycosylated FLVCR form: 55 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Hep G2 cell lysate: sc-2227 or NTERA-2 cl.D1 whole cell lysate: sc-364181.

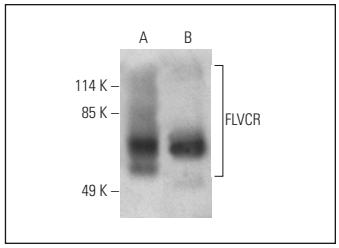
RECOMMENDED SUPPORT REAGENTS

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



FLVCR (C-4): sc-390100. Western blot analysis of FLVCR expression in HeLa (**A**), NTERA-2 cl.D1 (**B**) and Hep G2 (**C**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



FLVCR (C-4) HRP: sc-390100 HRP. Direct western blot analysis of FLVCR expression in NTERA-2 cl.D1 (**A**) and Hep G2 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Fiorito, V., et al. 2021. The heme synthesis-export system regulates the tricarboxylic acid cycle flux and oxidative phosphorylation. Cell Rep. 35: 109252.
2. Petrillo, S., et al. 2021. Endothelial heme dynamics drive cancer cell metabolism by shaping the tumor microenvironment. Biomedicines 9: 1557.
3. Allocco, A.L., et al. 2022. Inhibition of heme export and/or heme synthesis potentiates metformin anti-proliferative effect on cancer cell lines. Cancers 14: 1230.
4. Petrillo, S., et al. 2023. Endothelial cells require functional FLVCR1a during developmental and adult angiogenesis. Angiogenesis. E-published.

STORAGE

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

PROTOCOLS

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