

Vigilin (H-3): sc-271523

BACKGROUND

Vigilin, a K homology (KH) protein, is found in the nucleus and cytoplasm of all eukaryotic species. Vigilin contains a unique structure of 14 to 15 consecutively arranged KH domains, which function to mediate RNA-protein binding. Expression of the gene encoding Vigilin, which maps to chromosome 2q37.3, is essential for cell viability. Vigilin is active in heterochromatin formation and cytoplasmic mRNA decay, and can be a useful marker for translational activity. The 80S ribosome co-localizes with Vigilin, which interacts with the ribosomal complex through its C-terminal domain, suggesting its role in the link between tRNA-export and the channeled tRNA-cycle on ribosomes. Intra-cellular cholesterol upregulates Vigilin expression, and the protein specifically binds to high density lipoprotein molecules to function in the removal of excess cellular cholesterol.

REFERENCES

- McKnight, G.L., et al. 1992. Cloning and expression of a cellular high density lipoprotein-binding protein that is up-regulated by cholesterol loading of cells. *J. Biol. Chem.* 267: 12131-12141.
- Xia, Y.R., et al. 1993. Localization of the gene for high-density lipoprotein binding protein (HDLBP) to human chromosome 2q37. *Genomics* 16: 524-525.
- Plenz, G., et al. 1994. The human Vigilin gene: identification, chromosomal localization and expression pattern. *Hum. Genet.* 93: 575-582.
- Kügler, S., et al. 1996. Two additional 5' exons in the human Vigilin gene distinguish it from the chicken gene and provide the structural basis for differential routes of gene expression. *Eur. J. Biochem.* 238: 410-417.

CHROMOSOMAL LOCATION

Genetic locus: HDLBP (human) mapping to 2q37.3; Hdlbp (mouse) mapping to 1 D.

SOURCE

Vigilin (H-3) is a mouse monoclonal antibody raised against amino acids 126-290 mapping near the N-terminus of Vigilin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Vigilin (H-3) is available conjugated to agarose (sc-271523 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271523 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271523 PE), fluorescein (sc-271523 FITC), Alexa Fluor® 488 (sc-271523 AF488), Alexa Fluor® 546 (sc-271523 AF546), Alexa Fluor® 594 (sc-271523 AF594) or Alexa Fluor® 647 (sc-271523 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271523 AF680) or Alexa Fluor® 790 (sc-271523 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

Vigilin (H-3) is recommended for detection of Vigilin of mouse, rat and 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 Vigilin siRNA (h): sc-61788, Vigilin siRNA (m): sc-61789, Vigilin shRNA Plasmid (h): sc-61788-SH, Vigilin shRNA Plasmid (m): sc-61789-SH, Vigilin shRNA (h) Lentiviral Particles: sc-61788-V and Vigilin shRNA (m) Lentiviral Particles: sc-61789-V.

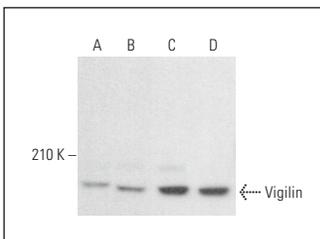
Molecular Weight of Vigilin: 155 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210, RAW 264.7 whole cell lysate: sc-2211 or c4 whole cell lysate: sc-364186.

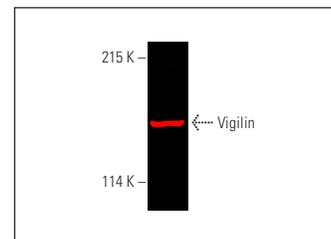
RECOMMENDED SUPPORT REAGENTS

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



Vigilin (H-3): sc-271523. Western blot analysis of Vigilin expression in Hep G2 (A), c4 (B), NIH/3T3 (C) and RAW 264.7 (D) whole cell lysates.



Vigilin (H-3): sc-271523. Near-Infrared western blot analysis of Vigilin expression in c4 whole cell lysate. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgGκ BP-CFL 790: sc-516181.

SELECT PRODUCT CITATIONS

- Brugier, A., et al. 2022. RACK1 associates with RNA-binding proteins vigilin and SERBP1 to facilitate dengue virus replication. *J. Virol.* 96: e0196221.

RESEARCH USE

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

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