

FHL-5 (S-18): sc-9369

BACKGROUND

The four-and-a-half-LIM domain (FHL) proteins include FHL-1 (SLIM1), FHL-2 (SLIM3), FHL-3 (SLIM2), FHL-4 and FHL-5. The signature "half-domain", a single zinc finger domain located in the N-terminal region, differentiates FHLs from other LIM-only proteins, which have numbers of zinc fingers. Specific combinations of FHL proteins elicit selective activation of both CREB and CREM. FHL-5, also known as ACT (activator of CREM in testis), is a testis-specific protein that interacts with CREM (a transcription factor required for spermatid differentiation) via its third LIM domain and can stimulate CREM activity independently of phosphorylation. This suggests that FHL-5 may participate in the regulation of spermatogenesis by acting as a transcriptional co-activator of CREM. During spermatid elongation, FHL-5 is translocated from the nucleus to the cytoplasm by the kinesin motor protein KIF17 thus silencing CREM activity.

REFERENCES

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2. Della Fazio, M.A., Servillo, G. and Sassone-Corsi, P. 1997. Cyclic AMP signalling and cellular proliferation: regulation of CREB and CREM. *FEBS Lett.* 410: 22-24.
3. Dawid, I.B., Breen, J.J. and Toyama, R. 1998. LIM domains: multiple roles as adapters and functional modifiers in protein interactions. *Trends Genet.* 14: 156-162.
4. Sassone-Corsi, P. 1998. Coupling gene expression to cAMP signalling: role of CREB and CREM. *Int. J. Biochem. Cell. Biol.* 30: 27-38.
5. Sassone-Corsi, P. 1998. Regulating the balance between differentiation and apoptosis: role of CREM in the male germ cells. *J. Mol. Med.* 76: 811-817.
6. De Cesare, D., Fimia, G.M. and Sassone-Corsi, P. 1999. Signaling routes to CREM and CREB: plasticity in transcriptional activation. *Trends Biochem. Sci.* 24: 281-285.

CHROMOSOMAL LOCATION

Genetic locus: FHL5 (human) mapping to 6q16.1; Fhl5 (mouse) mapping to 4 A3.

SOURCE

FHL-5 (S-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of FHL-5 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9369 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-9369 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

FHL-5 (S-18) is recommended for detection of FHL-5 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

FHL-5 (S-18) is also recommended for detection of FHL-5 in additional species, including equine, canine, bovine and porcine.

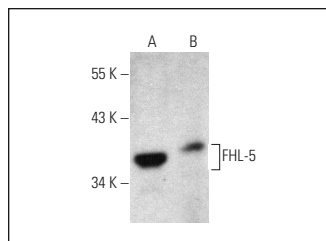
Suitable for use as control antibody for FHL-5 siRNA (h): sc-95151, FHL-5 siRNA (m): sc-140839, FHL-5 shRNA Plasmid (h): sc-95151-SH, FHL-5 shRNA Plasmid (m): sc-140839-SH, FHL-5 shRNA (h) Lentiviral Particles: sc-95151-V and FHL-5 shRNA (m) Lentiviral Particles: sc-140839-V.

FHL-5 (S-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

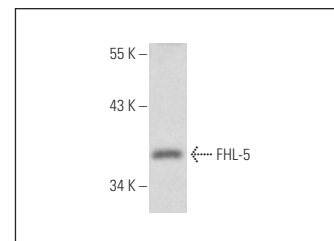
Molecular Weight of FHL-5: 33 kDa.

Positive Controls: RAW 264.7 nuclear extract: sc-24961, HCT-116 whole cell lysate: sc-364175 or PC-3 cell lysate: sc-2220.

DATA



FHL-5 (S-18): sc-9369. Western blot analysis of FHL-5 expression in HCT-116 whole cell lysate (A) and human epididymis tissue extract (B).



FHL-5 (S-18): sc-9369. Western blot analysis of FHL-5 expression in PC-3 whole cell lysate.

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.



Try **FHL-5 (F-26): sc-101045**, our highly recommended monoclonal alternative to FHL-5 (S-18).