

FHL-5 (K-18): sc-9368

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 (mouse) mapping to 4 A3.

SOURCE

FHL-5 (K-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-9368 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9368 X, 200 µg/0.1 ml.

APPLICATIONS

FHL-5 (K-18) is recommended for detection of FHL-5 of mouse and rat 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).

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

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

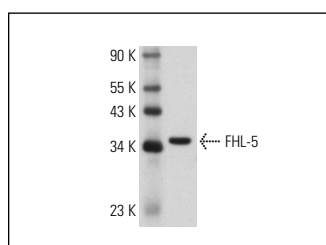
Molecular Weight of FHL-5: 33-34 kDa.

Positive Controls: RAW 264.7 nuclear extract: sc-24961.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



FHL-5 (K-18): sc-9368. Western blot analysis of FHL-5 expression in RAW 264.7 nuclear extract.

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.