SANTA CRUZ BIOTECHNOLOGY, INC.

FHL-3 (A-16): sc-13411

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The Power to Question

BACKGROUND

The four-and-a-half-LIM domain (FHL) proteins include FHL-1 (SLIM1), FHL-2 (SLIM3), FHL-3 (SLIM2) and FHL-4. 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. Skeletal and cardiac muscle express FHL-1 in high levels as compared to the low level of expression in smooth muscle of the colon, small intestine and prostate. FHL-1 localizes to the cytosol of myoblasts, myotubes, and differentiated myocytes. FHL-2 is also located in cardiac and skeletal muscle, as well as in placenta and ovary tissues. FHL-3 is found in skeletal muscle, but absent in cardiac muscle. FHL-4 is expressed exclusively by the seminiferous epithelium of the testis, which suggests that FHL-4 is involved in spermatogenesis. The genetic loci for FHLs vary considerably despite similiar amino acid sequences among the FHL group.

REFERENCES

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3. Lee, S.M.,et al. 1998. Chromosomal mapping, tissue distribution and cDNA sequence of four-and-a-half LIM domain protein 1 (FHL-1). Gene 216: 163-170.
4. Lee, S.M., et al. 1998. Chromosomal mapping of a skeletal muscle specific LIM-only protein FHL-3 to the distal end of the short arm of human chromosome 1. Somat. Cell Mol. Genet. 24: 197-202.
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7. Greene, W.K., et al. 1999. Genomic structure, tissue expression and chromosomal location of the LIM-only gene, SLIM1. Gene 232: 203-207.
8. Brown, S., et al. 1999. Characterization of two isoforms of the skeletal muscle LIM protein 1, SLIM1. Localization of SLIM1 at focal adhesions and the isoform slimmer in the nucleus of myoblasts and cytoplasm of myotbues suggest distinct roles in the cytoskeleton and in nuclear-cytoplasmic communication. J. Biol. Chem. 274: 27083-27091.
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CHROMOSOMAL LOCATION

Genetic locus: FHL3 (human) mapping to 1p34.3; Fhl3 (mouse) mapping to 4 D2.2.

SOURCE

FHL-3 (A-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of FHL-3 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-13411 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FHL-3 (A-16) is recommended for detection of FHL-3 of mouse, rat and 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).

FHL-3 (A-16) is also recommended for detection of FHL-3 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for FHL-3 siRNA (h): sc-37893, FHL-3 siRNA (m): sc-37894, FHL-3 shRNA Plasmid (h): sc-37893-SH, FHL-3 shRNA Plasmid (m): sc-37894-SH, FHL-3 shRNA (h) Lentiviral Particles: sc-37893-V and FHL-3 shRNA (m) Lentiviral Particles: sc-37894-V.

Molecular Weight of FHL-3: 31 kDa.

Positive Controls: Sol8 nuclear extract: sc-2157, mouse heart extract: sc-2254 or Sol8 cell lysate: sc-2249.

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.