SANTA CRUZ BIOTECHNOLOGY, INC.

FHL-3 (H-120): sc-28692

SANTA CRUZ BIOTECHNOLOGY

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

1. Morgan, M.J. and Madgwick, A.J. 1996. SLIM defines a novel family of LIM-proteins expressed in skeletal muscle. Biochem. Biophys. Res. Commun. 225: 632-638.
2. Chan, K.K., et al. 1998. Molecular cloning and characterization of FHL-2, a novel LIM domain protein preferentialy expressed in human heart. Gene 210: 345-350.
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.
5. Morgan, M.J., et al. 1999. The LIM proteins FHL-1 and FHL-3 are expressed differently in skeletal muscle. Biochem. Biophys. Res. Commun. 255: 245-250.
6. Morgan, M.J., et al. 1999. The fourth member of the FHL family of LIM proteins is expressed exclusively in the testis. Biochem. Biophys. Res. Commun. 255: 251-255.
7. Greene, W.K., et al. 1999. Genomic structure, tissue expression and chromosomal location of the LIM-only gene, SLIM1. Gene 232: 203-207.

CHROMOSOMAL LOCATION

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

SOURCE

FHL-3 (H-120) is a rabbit polyclonal antibody raised against amino acids 161-280 mapping at the C-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.

APPLICATIONS

FHL-3 (H-120) 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), 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).

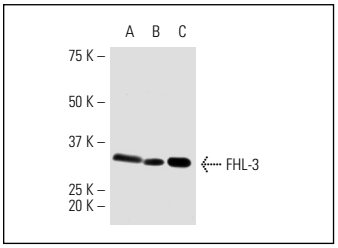
FHL-3 (H-120) is also recommended for detection of FHL-3 in additional species, including equine, canine, bovine and porcine.

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.

DATA



FHL-3 (H-120): sc-28692. Western blot analysis of FHL-3 expression in mouse heart tissue extract (**A**), Sol8 nuclear extract (**B**) and L6 whole cell lysate (**C**).

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.