

# SPFH1 (C-18): sc-244211

## BACKGROUND

SPFH1 (stomatin-prohibitin-flotillin-HflC/K domain-containing protein 1), also known as ERLIN1 (ER lipid raft associated 1), KE04 or KE04, is a 346 amino acid endoplasmic reticulum (ER) membrane protein that belongs to the band 7/mec-2 family and forms a heteromeric complex with SPFH2. The SPFH1/SPFH2 complex is a ring-shaped complex that mediates the ER-associated degradation (ERAD) of inositol 1,4,5-trisphosphate receptors (IP3Rs). SPFH1 is believed to be a component of lipid rafts and is expressed in the heart, placenta, liver, kidney, pancreas, prostate, testis, ovary and small intestine. The SPFH1 gene maps to human chromosome 10q24.31 and contains four transcripts. Human chromosome 10 comprises over 131 million base pairs which represent 99.4% of the euchromatic DNA, and includes one megabase of heterochromatic sequence within the pericentromeric region of the short and long arm of the chromosome. 1,357 genes are present, including 816 that are protein coding, and 430 that are pseudogenes.

## REFERENCES

- Li, N., et al. 2000. Identification and characterization of a novel gene KE04 differentially expressed by activated human dendritic cells. *Biochem. Biophys. Res. Commun.* 279: 487-493.
- Deloukas, P., et al. 2004. The DNA sequence and comparative analysis of human chromosome 10. *Nature* 429: 375-381.
- Browman, D.T., et al. 2006. Erlin-1 and erlin-2 are novel members of the prohibitin family of proteins that define lipid-raft-like domains of the ER. *J. Cell Sci.* 119: 3149-3160.
- Online Mendelian Inheritance in Man, OMIM™. 2007. Johns Hopkins University, Baltimore, MD. MIM Number: 611604. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Wang, Y., et al. 2009. SPFH1 and SPFH2 mediate the ubiquitination and degradation of inositol 1,4,5-trisphosphate receptors in muscarinic receptor-expressing HeLa cells. *Biochim. Biophys. Acta* 1793: 1710-1718.
- Wojcikiewicz, R.J., et al. 2009. When worlds collide: IP(3) receptors and the ERAD pathway. *Cell Calcium* 46: 147-153.

## CHROMOSOMAL LOCATION

Genetic locus: ERLIN1 (human) mapping to 10q24.31.

## SOURCE

SPFH1 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of SPFH1 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-244211 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

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

## APPLICATIONS

SPFH1 (C-18) is recommended for detection of SPFH1 of 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); non cross-reactive with SPFH2.

SPFH1 (C-18) is also recommended for detection of SPFH1 in additional species, including canine and porcine.

Suitable for use as control antibody for SPFH1 siRNA (h): sc-90434, SPFH1 shRNA Plasmid (h): sc-90434-SH and SPFH1 shRNA (h) Lentiviral Particles: sc-90434-V.

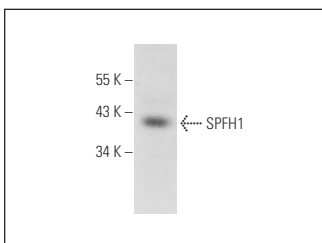
Molecular Weight of SPFH1: 39 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227.

## 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



SPFH1 (C-18): sc-244211. Western blot analysis of SPFH1 expression in Hep G2 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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.