SANTA CRUZ BIOTECHNOLOGY, INC.

# PHTF1 (PHTF1R8): sc-81111

## BACKGROUND

PHTF1 (putative homeodomain transcription factor 1), also known as PHTF, is a potential transcription regulator. It is a ubiquitously expressed integral, multipass membrane protein with predominant expression in testis. PHTF1 is associated with the ER (endoplasmic reticulum) and contains one bHLH (basic helix-loop-helix) domain. It is present in the cell during meiosis and spermiogenesis but, by the end of spermiogenesis, is released from the mature cell within the residual bodies. This implies that PHTF1 may play a role in the spermatozoa maturation process. In addition, PHTF1 is believed to interact with FEM1B and may be responsible for recruiting FEM1B to the surface of the ER membrane. This suggests that PHTF1 acts as a sequestering or anchoring protein for FEM1B. Two PHTF1 isoforms exist due to alternate splicing events. Isoform 2 is the shorter form and lacks the amino acid residues 648 to 762.

## REFERENCES


1. Manuel, A., Beaupain, D., Romeo, P.H. and Raich, N. 2000. Molecular characterization of a novel gene family (PHTF) conserved from *Drosophila* to mammals. Genomics 64: 216-220.
2. Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 604950. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
3. Oyhenart, J., Le Goffic, R., Samson, M., Jégou, B. and Raich, N. 2003. PHTF1 is an integral membrane protein localized in an endoplasmic reticulum domain in maturing male germ cells. Biol. Reprod. 68: 1044-1053.
4. Oyhenart, J., Dacheux, J.L., Dacheux, F., Jégou, B. and Raich, N. 2004. Expression, regulation, and immunolocalization of putative homeodomain transcription factor 1 (PHTF1) in rodent epididymis: evidence for a novel form resulting from proteolytic cleavage. Biol. Reprod. 72: 50-57.
5. Oyhenart, J., Benichou, S. and Raich, N. 2005. Putative homeodomain transcription factor 1 interacts with the feminization factor homolog fem1b in male germ cells. Biol. Reprod. 72: 780-787.
6. Natrajan, R., Williams, R.D., Grigoriadis, A., Mackay, A., Fenwick, K., Ashworth, A., Dome, J.S., Grundy, P.E., Pritchard-Jones, K. and Jones, C. 2007. Delineation of a 1Mb breakpoint region at 1p13 in Wilms tumors by fine-tiling oligonucleotide array CGH. Genes Chromosomes Cancer 46: 607-615.


## CHROMOSOMAL LOCATION

Genetic locus: PHTF1 (human) mapping to 1p13.2.

## SOURCE

PHTF1 (PHTF1R8) is a mouse monoclonal antibody raised against a recombinant protein corresponding to an internal region of PHTF1 of human origin.

## PRODUCT

Each vial contains 100 µg $IgG_1$ in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

## APPLICATIONS

PHTF1 (PHTF1R8) is recommended for detection of PHTF1 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)].

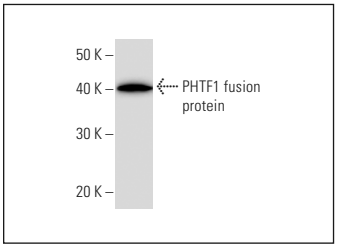
Suitable for use as control antibody for PHTF1 siRNA (h): sc-78940, PHTF1 shRNA Plasmid (h): sc-78940-SH and PHTF1 shRNA (h) Lentiviral Particles: sc-78940-V.

Molecular Weight of PHTF1 isoform 1: 84 kDa.

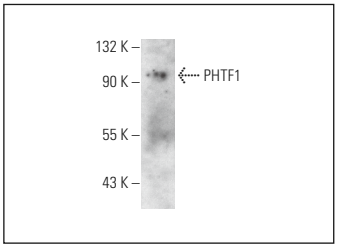
Molecular Weight of PHTF1 isoform 2: 56 kDa.

Positive Controls: human testis extract: sc-363781.

## DATA




PHTF1 (PHTF1R8): sc-81111. Western Blot analysis of human recombinant PHTF1 fusion protein.




PHTF1 (PHTF1R8): sc-81111. Western blot analysis of PHTF1 expression in human testis tissue extract.

## STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

## RESEARCH USE

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

## PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.