# SANTA CRUZ BIOTECHNOLOGY, INC.

# HOMEZ (Z-23): sc-133668



The Power to Question

## BACKGROUND

Homeodomain-containing proteins function as transcription factors that typically switch on cascades of other genes. Usually homeodomain proteins act in the promoter region of their target genes as complexes with other transcription factors, leading to much higher target specificity than a single homeodomain protein. HOMEZ (Homeobox and leucine zipper protein) is a 525 amino acid nuclear protein that contains 3 atypical homeodomains, 2 leucine zipper-like motifs, proline and serine-rich motifs and an acidic domain. Within homeodomain 2, it contains a putative nuclear localization signal. HOMEZ shares significant sequence similarity with mouse ZHX1 and sequences that are homologous to HOMEZ are restricted to vertebrates. Likely functioning as a transcription regulator, HOMEZ is ubiquitously expressed with highest levels found in in ovary, testis, kidney, fetal lung and kidney.

## REFERENCES

- McGinnis, W., Levine, M.S., Hafen, E., Kuroiwa, A. and Gehring, W.J. 1984. A conserved DNA sequence in homoeotic genes of the *Drosophila* Antennapedia and bithorax complexes. Nature 308: 428-433.
- Scott, M.P. and Weiner, A.J. 1984. Structural relationships among genes that control development: sequence homology between the Antennapedia, Ultrabithorax, and fushi tarazu loci of *Drosophila*. Proc. Natl. Acad. Sci. USA 81: 4115-4119.
- Vasák, M. 1991. Criteria of purity for metallothioneins. Meth. Enzymol. 205: 44-47.
- Nagase, T., Kikuno, R., Ishikawa, K.I., Hirosawa, M. and Ohara, O. 2000. Prediction of the coding sequences of unidentified human genes. XVI. The complete sequences of 150 new cDNA clones from brain which code for large proteins *in vitro*. DNA Res. 7: 65-73.
- Bayarsaihan, D., Enkhmandakh, B., Makeyev, A., Greally, J.M., Leckman, J.F. and Ruddle, F.H. 2003. Homez, a homeobox leucine zipper gene specific to the vertebrate lineage. Proc. Natl. Acad. Sci. USA 100: 10358-10363.
- 6. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 608119. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Merabet, S., Hudry, B., Saadaoui, M. and Graba, Y. 2009. Classification of sequence signatures: a guide to Hox protein function. Bioessays 31: 500-511.

## CHROMOSOMAL LOCATION

Genetic locus: Homez (mouse) mapping to 14 C3.

## SOURCE

HOMEZ (Z-23) is a Protein A purified rabbit polyclonal antibody raised against synthetic HOMEZ peptide of mouse origin.

## PRODUCT

Each vial contains 100  $\mu g$  IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

#### APPLICATIONS

HOMEZ (Z-23) is recommended for detection of HOMEZ of mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for HOMEZ siRNA (m): sc-146069, HOMEZ shRNA Plasmid (m): sc-146069-SH and HOMEZ shRNA (m) Lentiviral Particles: sc-146069-V.

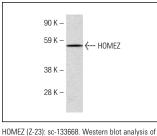
Molecular Weight of HOMEZ: 59 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

## **RECOMMENDED SECONDARY REAGENTS**

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunopre-cipitation: use Protein A/G PLUS-Agarose: sc-2033 (0.5 ml agarose/2.0 ml).

#### DATA



HUMEZ (2-23): SC-133668. Western blot analysis of HOMEZ expression in NIH/3T3 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.

#### **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.