

CapZ- α 3 (E-12): sc-167390

BACKGROUND

The F-Actin family of capping proteins includes CapZ- α 1, CapZ- α 2, CapZ- α 3 and CapZ- β 3, all of which function in a calcium-dependent manner and bind to the fast growing barbed end of Actin filaments, thereby blocking protein exchange at these ends. CapZ- α 3 (capping protein (Actin filament) muscle Z-line, α 3), also known as Gsg3 or CAPP3, is a 299 amino acid member of the F-Actin capping protein family. Expressed primarily in sperm and testis and localizing specifically to the neck region of ejaculated sperm, CapZ- α 3 is thought to play an important role in male fertility, specifically influencing sperm architecture and spermatid morphogenesis. CapZ- α 3 may exist as a heterodimer of α and β subunits and shares 91% sequence similarity with its mouse counterpart, suggesting a conserved role between species.

REFERENCES

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2. Hurst, S., et al. 1998. Expression of a testis-specific putative Actin-capping protein associated with the developing acrosome during rat spermiogenesis. *Mol. Reprod. Dev.* 49: 81-91.
3. Yoshimura, Y., et al. 1999. Genomic analysis of male germ cell-specific Actin capping protein α . *Gene* 237: 193-199.
4. Miyagawa, Y., et al. 2002. Molecular cloning and characterization of the human orthologue of male germ cell-specific Actin capping protein α 3 (CP α 3). *Mol. Hum. Reprod.* 8: 531-539.
5. Online Mendelian Inheritance in Man, OMIM[™]. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 608722. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
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CHROMOSOMAL LOCATION

Genetic locus: CAPZA3 (human) mapping to 12p12.3; Capza3 (mouse) mapping to 6 G2.

SOURCE

CapZ- α 3 (E-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CapZ- α 3 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-167390 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CapZ- α 3 (E-12) is recommended for detection of CapZ- α 3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 other CapZ- α family members.

Suitable for use as control antibody for CapZ- α 3 siRNA (h): sc-95744, CapZ- α 3 siRNA (m): sc-142008, CapZ- α 3 shRNA Plasmid (h): sc-95744-SH, CapZ- α 3 shRNA Plasmid (m): sc-142008-SH, CapZ- α 3 shRNA (h) Lentiviral Particles: sc-95744-V and CapZ- α 3 shRNA (m) Lentiviral Particles: sc-142008-V.

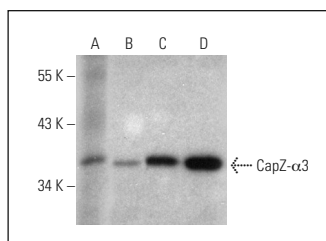
Molecular Weight of CapZ- α 3: 33 kDa.

Positive Controls: human testis extract: sc-363781, RT-4 whole cell lysate: sc-364257 or DU 145 cell lysate: sc-2268.

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



CapZ- α 3 (E-12): sc-167390. Western blot analysis of CapZ- α 3 expression in human testis tissue extract (A) and RT-4 (B), DU 145 (C) and U-251-MG (D) whole cell lysates.

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.