

CASC3 (G-10): sc-376186

BACKGROUND

CASC3 (cancer susceptibility candidate 3), also known as BTZ or MLN51, is a 703 amino acid protein that localizes to both the nucleus and the cytoplasm and contains a coiled coil domain. Expressed in a variety of tissues, CASC3 functions as a component of the exon junction complex (EJC), a multi-protein structure that exists on spliced mRNAs and plays a role in non-sense-mediated mRNA decay at exon-exon junctions. As a component of the EJC, CASC3 is thought to participate in mRNA modification and may also be involved in mRNA transport and ribonucleoprotein particle function. CASC3 is overexpressed in breast and gastric cancers, suggesting a role for CASC3 in tumor development and metastasis. The gene encoding CASC3 maps to human chromosome 17, which comprises over 2.5% of the human genome and encodes over 1,200 genes.

REFERENCES

1. Tomasetto, C., et al. 1995. Identification of four novel human genes amplified and overexpressed in breast carcinoma and localized to the q11-q21.3 region of chromosome 17. *Genomics* 28: 367-376.
2. Varis, A., et al. 2002. Targets of gene amplification and overexpression at 17q in gastric cancer. *Cancer Res.* 62: 2625-2629.
3. Degot, S., et al. 2002. Metastatic Lymph Node 51, a novel nucleocytoplasmic protein overexpressed in breast cancer. *Oncogene* 21: 4422-4434.
4. Macchi, P., et al. 2003. Barentsz, a new component of the Staufen-containing ribonucleoprotein particles in mammalian cells, interacts with Staufen in an RNA-dependent manner. *J. Neurosci.* 23: 5778-5788.
5. Degot, S., et al. 2004. Association of the breast cancer protein MLN51 with the exon junction complex via its speckle localizer and RNA binding module. *J. Biol. Chem.* 279: 33702-33715.

CHROMOSOMAL LOCATION

Genetic locus: CASC3 (human) mapping to 17q21.1.

SOURCE

CASC3 (G-10) is a mouse monoclonal antibody raised against amino acids 451-640 mapping near the C-terminus of CASC3 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CASC3 (G-10) is available conjugated to agarose (sc-376186 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376186 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376186 PE), fluorescein (sc-376186 FITC), Alexa Fluor[®] 488 (sc-376186 AF488), Alexa Fluor[®] 546 (sc-376186 AF546), Alexa Fluor[®] 594 (sc-376186 AF594) or Alexa Fluor[®] 647 (sc-376186 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376186 AF680) or Alexa Fluor[®] 790 (sc-376186 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

CASC3 (G-10) is recommended for detection of CASC3 of human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for CASC3 siRNA (h): sc-93943, CASC3 shRNA Plasmid (h): sc-93943-SH and CASC3 shRNA (h) Lentiviral Particles: sc-93943-V.

Molecular Weight of CASC3: 76 kDa.

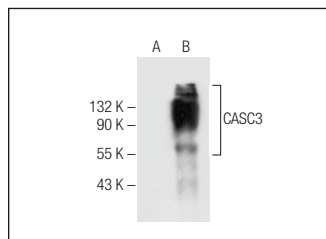
Positive Controls: CASC3 (h2): 293T Lysate: sc-116218.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

- 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



CASC3 (G-10): sc-376186. Western blot analysis of CASC3 expression in non-transfected: sc-117752 (A) and human CASC3 transfected: sc-116218 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Cho, H., et al. 2022. AKT constitutes a signal-promoted alternative exon-junction complex that regulates nonsense-mediated mRNA decay. *Mol. Cell* 82: 2779-2796.e10.

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.