SANTA CRUZ BIOTECHNOLOGY, INC.

CAS4 (H-3): sc-376968

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cas scaffolding protein family member 4, CAS4, also designated CASS4, HEFL (HEF-like protein), HEPL or C20orf32 is a 786 amino acid protein belonging to the CAS family which also includes p130 Cas, Sin and Cas-L. CAS4 is phosphorylated on tyrosines by SRC, interacts directly with focal adhesion kinase, FAK via its C-terminal SH3 domain and is thought to function as a possible docking protein involved in tyrosine-kinase-based signaling as it relates to cell adhesion. CAS4 is localized to the cytoplasm and cytoskeleton with most abundant expression found in lung and spleen. High expression has also been observed in both ovarian and leukemia cell lines. Multiple isoforms of CAS4 exist due to alternative splicing events. The gene encoding CAS4 maps to human chromosome 20 which represents about 2% of human DNA; chromosome 20 consists of approximately 63 million bases and 600 genes.

REFERENCES

1. Collins, S., et al. 2001. Gerstmann-Sträussler-Scheinker syndrome, fatal familial insomnia and kuru: a review of these less common human transmissible spongiform encephalopathies. J. Clin. Neurosci. 8: 387-397.
2. Ville, D., et al. 2006. Early pattern of epilepsy in the ring chromosome 20 syndrome. Epilepsia 47: 543-549.
3. Elghezal, H., et al. 2007. Ring chromosome 20 syndrome without deletions of the subtelomeric and CHRNA4-KCNQ2 genes loci. Eur. J. Med. Genet. 50: 441-445.
4. Lundwall, A. 2007. A locus on chromosome 20 encompassing genes that are highly expressed in the epididymis. Asian J. Androl. 9: 540-544.
5. Rikova, K., et al. 2007. Global survey of phosphotyrosine signaling identifies oncogenic kinases in lung cancer. Cell 131: 1190-1203.
6. Singh, M.K., et al. 2008. A novel CAS family member, HEPL, regulates FAK and cell spreading. Mol. Biol. Cell 19: 1627-1636.
7. Zahedi, R.P., et al. 2008. Phosphoproteome of resting human platelets. J. Proteome Res. 7: 526-534.

CHROMOSOMAL LOCATION

Genetic locus: CASS4 (human) mapping to 20q13.2.

SOURCE

CAS4 (H-3) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 111-149 within an internal region of CAS4 of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-376968 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

CAS4 (H-3) is recommended for detection of CAS4 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), immunohistochemistry (including paraffin-embedded sections) (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 CAS4 siRNA (h): sc-72733, CAS4 shRNA Plasmid (h): sc-72733-SH and CAS4 shRNA (h) Lentiviral Particles: sc-72733-V.

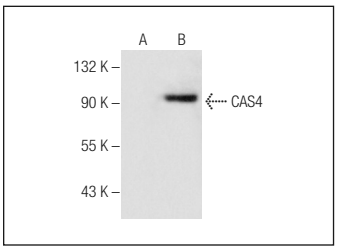
Molecular Weight of CAS4: 105 kDa.

Positive Controls: CAS4 (h): 293T Lysate: sc-114182.

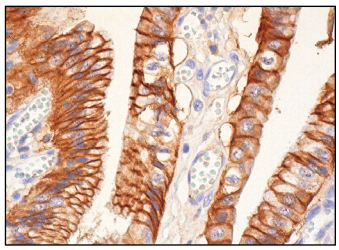
RECOMMENDED SUPPORT REAGENTS

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. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



CAS4 (H-3): sc-376968. Western blot analysis of CAS4 expression in non-transfected: sc-117752 (**A**) and human CAS4 transfected: sc-114182 (**B**) 293T whole cell lysates.



CAS4 (H-3): sc-376968. Immunoperoxidase staining of formalin fixed, paraffin-embedded human gall bladder tissue showing cytoskeletal staining of glandular cells.

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 for detailed protocols and support products.