SANTA CRUZ BIOTECHNOLOGY, INC.

STAP-2 (E-4): sc-390886

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Protein kinases comprise a large group of encoded factors that regulate cellular processes by catalyzing the transfer of a phosphate group to a hydroxyl acceptor in serine, threonine or tyrosine residues. Kinases are capable of influencing the oncogenic potential of cell sytems at the level of oncoprotein or tumor suppressor protein phosphorylation states. STAP-2 is a protein that contains a pleckstrin homology (PH) domain and an SH2 domain, and associates with BRK. BRK (breast tumor kinase, Sik) is a 451 amino acid, nonreceptor protein-tyrosine kinase that is overexpressed in breast tumors and metastatic melanoma cell lines. Similar to the Src family of intracellular kinses, BRK is comprised of an SH3 domain, an SH2 domain, and a catalytic domain. STAP-2 is susceptiple to tyrosine phosphorylation and may be invovled in tyrosine kinase-mediated signaling cascades, whose aberrant function may lead to metastis.

REFERENCES

1. Hunter, T. 1995. Protein kinases and phosphatases: the yin and yang of protein phosphorylation and signaling. Cell 80: 225-236.
2. Vasioukhin, V., et al. 1997. A role for the epithelial-cell-specific tyrosine kinase Sik during keratinocyte differentiation. Proc. Natl. Acad. Sci. USA 94: 14477-14482.
3. Mitchell, P.J., et al. 1997. Characterisation and chromosome mapping of the human non receptor tyrosine kinase gene, BRK. Oncogene 15: 1497-1502.
4. Hunter, T. 2000. Signaling—2000 and beyond. Cell 100: 113-127.
5. Mitchell, P.J., et al. 2000. A novel adaptor-like protein which is a substrate for the non-receptor tyrosine kinase, BRK. Oncogene 19: 4273-4282.

CHROMOSOMAL LOCATION

Genetic locus: STAP2 (human) mapping to 19p13.3.

SOURCE

STAP-2 (E-4) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 371-390 near the C-terminus of STAP-2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STAP-2 (E-4) is available conjugated to agarose (sc-390886 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-390886 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390886 PE), fluorescein (sc-390886 FITC), Alexa Fluor® 488 (sc-390886 AF488), Alexa Fluor® 546 (sc-390886 AF546), Alexa Fluor® 594 (sc-390886 AF594) or Alexa Fluor® 647 (sc-390886 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390886 AF680) or Alexa Fluor® 790 (sc-390886 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390886 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

STAP-2 (E-4) is recommended for detection of STAP-2 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 STAP-2 siRNA (h): sc-38936, STAP-2 shRNA Plasmid (h): sc-38936-SH and STAP-2 shRNA (h) Lentiviral Particles: sc-38936-V.

Molecular Weight of human STAP-2 isoforms: 45/50 kDa.

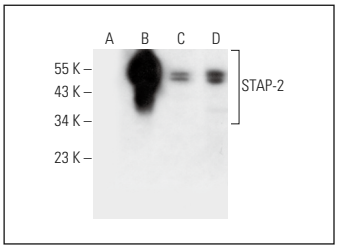
Molecular Weight of mouse STAP-2 isoforms: 46/31 kDa.

Positive Controls: STAP-2 (h): 293 Lysate: sc-110839, MCF7 whole cell lysate: sc-2206 or MDA-MB-231 cell lysate: sc-2232.

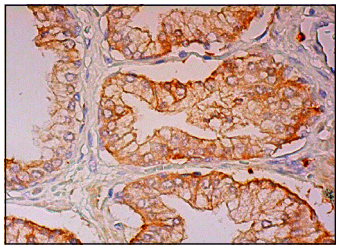
RECOMMENDED SUPPORT REAGENTS

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



STAP-2 (E-4): sc-390886. Western blot analysis of STAP-2 expression in non-transfected 293: sc-110760 (**A**), human STAP-2 transfected 293: sc-110839 (**B**), MCF7 (**C**) and MDA-MB-231 (**D**) whole cell lysates.



STAP-2 (E-4): sc-390886. Immunoperoxidase staining of formalin fixed, paraffin-embedded human prostate tissue showing cytoplasmic and membrane 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.