

STAP-2 (M-163): sc-366067

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 systems 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 kinases, BRK is comprised of an SH3 domain, an SH2 domain, and a catalytic domain. STAP-2 is susceptible to tyrosine phosphorylation and may be involved in tyrosine kinase-mediated signaling cascades, whose aberrant function may lead to metastasis.

REFERENCES

- Hunter, T. 1995. Protein kinases and phosphatases: the yin and yang of protein phosphorylation and signaling. *Cell* 80: 225-236.
- 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.
- Mitchell, P.J., et al. 1997. Characterisation and chromosome mapping of the human non receptor tyrosine kinase gene, BRK. *Oncogene* 15: 1497-1502.
- Hunter, T. 2000. Signaling—2000 and beyond. *Cell* 100: 113-127.
- 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* (mouse) mapping to 17 D.

SOURCE

STAP-2 (M-163) is a rabbit polyclonal antibody raised against amino acids 1-163 mapping at the N-terminus of STAP-2 of mouse origin.

PRODUCT

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

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.

APPLICATIONS

STAP-2 (M-163) is recommended for detection of STAP-2 of mouse and rat origin by Western Blotting (starting dilution 1:200, 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 STAP-2 siRNA (m): sc-153877, STAP-2 shRNA Plasmid (m): sc-153877-SH and STAP-2 shRNA (m) Lentiviral Particles: sc-153877-V.

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

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

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™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.