SANTA CRUZ BIOTECHNOLOGY, INC.

# STRAD (4E4): sc-293230

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Peutz-Jegers syndrome (PJS) is a rare hereditary disease characterized by melanocytic macules of the lips, gastrointestinal hamartomatous polyps and an increased risk for many classes of cancer. The serine/threonine kinase LKB1 (also designated STK11) has been identified as the gene mutated in PJS. LKB1 activity increases upon the binding of a regulatory complex consisting of the STE20-related adaptor-α (STRAD α) pseudo kinase and the calcium binding protein 39 (MO25 α). STRAD determines the subcellular localization of LKB1 by initiating its translocation from the nucleus to the cytoplasm, thus regulating the tumor suppressor activity of LKB1.

## REFERENCES


1. Jenne, D.E., et al. 1998. Peutz-Jeghers syndrome is caused by mutations in a novel serine/threonine kinase. Nat. Genet. 18: 38-43.
2. Hemminki, A., et al. 1998. A serine/threonine kinase gene defective in Peutz-Jeghers syndrome. Nature 391: 184-187.
3. Mehenni, H., et al. 1998. Loss of LKB1 kinase activity in Peutz-Jeghers syndrome, and evidence for allelic and locus heterogeneity. Am. J. Hum. Genet. 63: 1641-1650.
4. Bignell, G.R., et al. 1998. Low frequency of somatic mutations in the LKB1/Peutz-Jeghers syndrome gene in sporadic breast cancer. Cancer Res. 58: 1384-1386.
5. Avizienyte, E., et al. 1998. Somatic mutations in LKB1 are rare in sporatic colorectal and testicular tumors. Cancer Res. 58: 2087-2090.
6. Resta, N., et al. 1998. STK11 mutations in Peutz-Jeghers syndrome and sporatic colon cancer. Cancer Res. 58: 4799-4800.
7. Baas, A.F., et al. 2003. Activation of the tumour suppressor kinase LKB1 by the Ste20-like pseudokinase STRAD. EMBO J. 22: 3062-3072.
8. Milburn, C.C., et al. 2004. Crystal structure of MO25 α in complex with the C-terminus of the pseudo kinase Ste20-related adaptor. Nat. Struct. Mol. Biol. 11: 193-200.
9. http://harvester.embl.de/harvester/Q7RT/Q7RTN6.htm


## CHROMOSOMAL LOCATION

Genetic locus: STRADA (human) mapping to 17q23.3.

## SOURCE

STRAD (4E4) is a mouse monoclonal antibody raised against amino acids 251-346 of STRAD of human origin.

## PRODUCT

Each vial contains 100 µg $IgG_{2a}$ kappa light chain 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.

## APPLICATIONS

STRAD (4E4) is recommended for detection of STRAD of human 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), 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 STRAD siRNA (h): sc-45241, STRAD shRNA Plasmid (h): sc-45241-SH and STRAD shRNA (h) Lentiviral Particles: sc-45241-V.

Molecular Weight (predicted) of STRAD: 48 kDa.

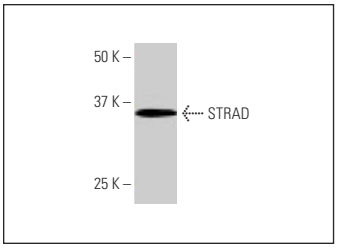
Molecular Weight (observed) of STRAD: 40-45 kDa.

Positive Controls: Hela S3 nuclear extract.

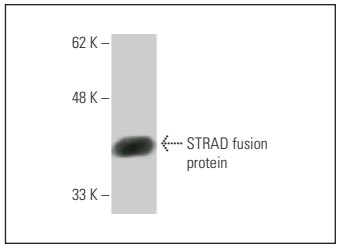
## RECOMMENDED SUPPORT REAGENTS

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




STRAD (4E4): sc-293230. Western blot analysis of STRAD expression in HeLa S3 nuclear extract.




STRAD (4E4): sc-293230. Western blot analysis of human recombinant STRAD fusion protein.

## 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.