SANTA CRUZ BIOTECHNOLOGY, INC.

Ska3 (H-9): sc-390966

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Ska3, also designated C13orf3 or RAMA1, is a 412 amino acid protein that belongs to the RAMA1 family of proteins. A component of the Ska1 complex, Ska3 localizes to the outer kinetochore and spindle microtubules during mitosis. The Ska1 complex is a microtubule-binding subcomplex of the outer kinetochore and is composed of two Ska1-Ska2 heterodimers, each heterodimer interacting with a Ska3 homodimer. Within the complex, which is important for chromosome segregation and facilitates microsphere movement along microtubules, Ska3 acts as a mediator of microtubule-stimulated oligomerization. The gene encoding for Ska3 maps to chromosome 13q12.11. Comprising nearly 4% of human DNA, chromosome 13 contains around 114 million base pairs and 400 genes. Key tumor suppressor genes on chromosome 13 include the breast cancer susceptibility gene, BRCA2, and the RB1 (retinoblastoma) gene. RB1 encodes a crucial tumor suppressor protein which, when defective, leads to malignant growth in the retina and has been implicated in a variety of other cancers. The gene SLITRK1, which is associated with Tourette syndrome, is on chromosome 13. As with most chromosomes, polysomy of part or all of chromosome 13 is deleterious to development and decreases the odds of survival. Trisomy 13, also known as Patau syndrome, is quite deadly and the few who survive past one year suffer from permanent neurologic defects, difficulty eating and vulnerability to serious respiratory infections.

CHROMOSOMAL LOCATION

Genetic locus: SKA3 (human) mapping to 13q12.11; Ska3 (mouse) mapping to 14 C3.

SOURCE

Ska3 (H-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 156-177 within an internal region of Ska3 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.

Ska3 (H-9) is available conjugated to agarose (sc-390966 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390966 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390966 PE), fluorescein (sc-390966 FITC), Alexa Fluor® 488 (sc-390966 AF488), Alexa Fluor® 546 (sc-390966 AF546), Alexa Fluor® 594 (sc-390966 AF594) or Alexa Fluor® 647 (sc-390966 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390966 AF680) or Alexa Fluor® 790 (sc-390966 AF790), 00 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390966 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Ska3 (H-9) is recommended for detection of Ska3 of mouse, rat and 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).

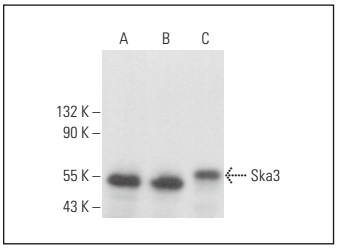
Ska3 (H-9) is also recommended for detection of Ska3 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Ska3 siRNA (h): sc-105145, Ska3 siRNA (m): sc-144992, Ska3 shRNA Plasmid (h): sc-105145-SH, Ska3 shRNA Plasmid (m): sc-144992-SH, Ska3 shRNA (h) Lentiviral Particles: sc-105145-V and Ska3 shRNA (m) Lentiviral Particles: sc-144992-V.

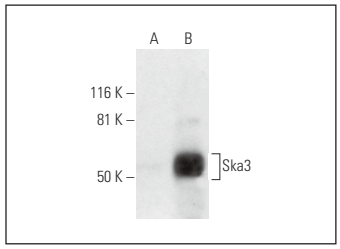
Molecular Weight of Ska3: 46 kDa.

Positive Controls: Ska3 (h): 293T Lysate: sc-371164, Jurkat whole cell lysate: sc-2204 or CCRF-CEM cell lysate: sc-2225.

DATA



Ska3 (H-9): sc-390966. Western blot analysis of Ska3 expression in Jurkat (**A**), CCRF-CEM (**B**) and NIH/3T3 (**C**) whole cell lysates.



Ska3 (H-9): sc-390966. Western blot analysis of Ska3 expression in non-transfected: sc-117752 (**A**) and human Ska3 transfected: sc-371164 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Riccio, P., et al. 2019. GATA-1 isoforms differently contribute to the production and compartmentation of reactive oxygen species in the myeloid leukemia cell line K562. J. Cell. Physiol. 234: 20829-20846.
2. Islam, A., et al. 2024. Search for chromosomal instability aiding variants reveal naturally occurring kinetochore gene variants that perturb chromosome segregation. iScience 27: 109007.

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.