

# SKAP (H-2): sc-398914



The Power to Question

## BACKGROUND

Interactions between kinetochore and spindle microtubules play a critical role in chromosome segregation during mitosis. SKAP (small kinetochore associated protein), also known as KNSTRN (kinetochore-localized astrin/SPAG5 binding protein), HSD11, C15orf23 or TRAF4AF1, is a 316 widely expressed nuclear and cytoplasmic protein that is an essential component of the mitotic spindle. Required for chromosome alignment during mitosis, SKAP regulates metaphase-to-anaphase transition, promotes normal timing of sister chromatid segregation and maintains spindle pole architecture. SKAP forms a complex with SPAG5 localizes to microtubule ends and stabilizes microtubule-kinetochore attachments. Mutations in the gene encoding SKAP may lead to cutaneous squamous cell carcinomas, a malignancy of the skin. SKAP is encoded by a gene located on human chromosome 15q15.1 and exists as three alternatively spliced isoforms. SKAP is down-regulated by nitric oxide.

## REFERENCES

1. Turpaev, K., et al. 2005. Analysis of differentially expressed genes in nitric oxide-exposed human monocytic cells. *Free Radic. Biol. Med.* 38: 1392-1400.
2. Fang, L., et al. 2009. SKAP associates with kinetochores and promotes the metaphase-to-anaphase transition. *Cell Cycle* 8: 2819-2827.
3. Burkard, T.R., et al. 2011. Initial characterization of the human central proteome. *BMC Syst. Biol.* 5: 17.
4. Dunsch, A.K., et al. 2011. The astrin-kinastrin/SKAP complex localizes to microtubule plus ends and facilitates chromosome alignment. *J. Cell Biol.* 192: 959-968.

## CHROMOSOMAL LOCATION

Genetic locus: Knstrn (mouse) mapping to 2 E5.

## SOURCE

SKAP (H-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 82-106 within an internal region of SKAP of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

SKAP (H-2) is available conjugated to agarose (sc-398914 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398914 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398914 PE), fluorescein (sc-398914 FITC), Alexa Fluor® 488 (sc-398914 AF488), Alexa Fluor® 546 (sc-398914 AF546), Alexa Fluor® 594 (sc-398914 AF594) or Alexa Fluor® 647 (sc-398914 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398914 AF680) or Alexa Fluor® 790 (sc-398914 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398914 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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## APPLICATIONS

SKAP (H-2) is recommended for detection of SKAP of mouse and rat 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).

Suitable for use as control antibody for SKAP siRNA (m): sc-142808, SKAP shRNA Plasmid (m): sc-142808-SH and SKAP shRNA (m) Lentiviral Particles: sc-142808-V.

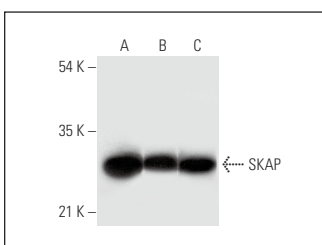
Molecular Weight of SKAP: 35 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, NIH/3T3 nuclear extract: sc-2138 or NIH/3T3 whole cell lysate: sc-2210.

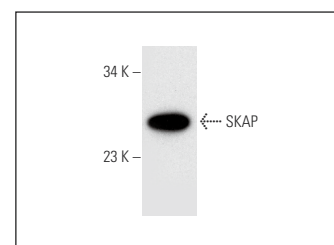
## RECOMMENDED SUPPORT REAGENTS

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.

## DATA



SKAP (H-2): sc-398914. Western blot analysis of SKAP expression in RAW 264.7 (A) and NIH/3T3 (B) nuclear extracts and NIH/3T3 whole cell lysate (C).



SKAP (H-2): sc-398914. Western blot analysis of SKAP expression in RAW 264.7 whole cell lysate.

## 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](http://www.scbt.com) for detailed protocols and support products.