

Sgo1 (F-8): sc-393993

BACKGROUND

Sgo1 (shugoshin-like 1), also known as SGO or NY-BR-85, is a 561 amino acid nuclear and cytoplasmic protein that is widely expressed with highest expression in testis. Sgo1 localizes to the inner centromere throughout prophase until metaphase. Sgo1 is suggested to prevent premature dissociation of the cohesin complex from centromeres after prophase by impeding phosphorylation of the SA-2 subunit of the cohesin complex at the centromere. This ensures cohesin persistence at the centromere until cohesin cleavage is achieved by separase at the anaphase stage of mitosis. Sgo1 is essential for proper chromosome segregation and for proper attachment of spindle microtubule to the kinetochore. Sgo1 may also play a role in the tension sensing mechanism of the spindle-assembly checkpoint by regulating Plk1 kinetochore affinity. Sgo1 exists as seven alternatively isoforms one of which (isoform 3) does not localize to kinetochores during any stages of the cell cycle.

CHROMOSOMAL LOCATION

Genetic locus: SGO1 (human) mapping to 3p24.3; Sgo1 (mouse) mapping to 17 C.

SOURCE

Sgo1 (F-8) is a mouse monoclonal antibody raised against amino acids 1-116 mapping at the N-terminus of Sgo1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Sgo1 (F-8) is available conjugated to agarose (sc-393993 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-393993 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-393993 PE), fluorescein (sc-393993 FITC), Alexa Fluor® 488 (sc-393993 AF488), Alexa Fluor® 546 (sc-393993 AF546), Alexa Fluor® 594 (sc-393993 AF594) or Alexa Fluor® 647 (sc-393993 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-393993 AF680) or Alexa Fluor® 790 (sc-393993 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

Sgo1 (F-8) is recommended for detection of Sgo1 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).

Suitable for use as control antibody for Sgo1 siRNA (h): sc-106548, Sgo1 siRNA (m): sc-153422, Sgo1 shRNA Plasmid (h): sc-106548-SH, Sgo1 shRNA Plasmid (m): sc-153422-SH, Sgo1 shRNA (h) Lentiviral Particles: sc-106548-V and Sgo1 shRNA (m) Lentiviral Particles: sc-153422-V.

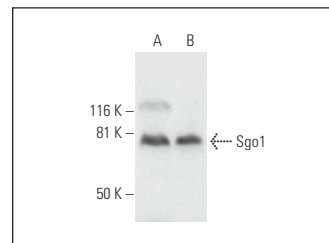
Molecular Weight of Sgo1: 75 kDa.

Positive Controls: MDA-MB-231 cell lysate: sc-2232, 3T3-L1 cell lysate: sc-2243 or MCF7 whole cell lysate: sc-2206.

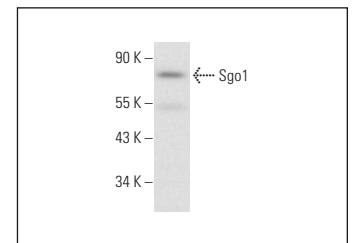
RECOMMENDED SUPPORT REAGENTS

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



Sgo1 (F-8): sc-393993. Western blot analysis of Sgo1 expression in MDA-MB-231 (A) and MCF7 (B) whole cell lysates.



Sgo1 (F-8): sc-393993. Western blot analysis of Sgo1 expression in 3T3-L1 whole cell lysate.

SELECT PRODUCT CITATIONS

- Jusino, S., et al. 2021. E2F3 drives the epithelial-to-mesenchymal transition, cell invasion, and metastasis in breast cancer. *Exp. Biol. Med.* 246: 2057-2071.
- Almeida, A.C., et al. 2022. Augmin-dependent microtubule self-organization drives kinetochore fiber maturation in mammals. *Cell Rep.* 39: 110610.
- Gomes, A.M., et al. 2022. Micronuclei from misaligned chromosomes that satisfy the spindle assembly checkpoint in cancer cells. *Curr. Biol.* 32: 4240-4254.e5.
- Jusino, S., et al. 2023. Sustained Shugoshin 1 downregulation reduces tumor growth and metastasis in a mouse xenograft tumor model of triple-negative breast cancer. *Cell Div.* 18: 6.
- Song, H., et al. 2023. Hornerin mediates phosphorylation of the polo-box domain in Plk1 by Chk1 to induce death in mitosis. *Cell Death Differ.* 30: 2151-2166.

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.

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