



Rabbit Anti-Shugoshin antibody

SL17476R

Product Name:	Shugoshin
Chinese Name:	乳腺癌NY BR 85抗原抗体
Alias:	hSgo 1; hSgo1; NY BR 85; Serologically defined breast cancer antigen NY BR 85; Serologically defined breast cancer antigen NY-BR-85; SGO 1; SGO; SGO L1; SGO1; SGOL 1; SGOL1; SGOL1_HUMAN; Shugoshin 1AB protein; Shugoshin 1CD protein; Shugoshin 1EFprotein; Shugoshin 1GH protein; Shugoshin 1KL protein; Shugoshin like 1 (S. pombe); Shugoshin like 1; Shugoshin-like 1.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Rat,Pig,Horse,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800ICC=1:100-500IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	64kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human Shugoshin:1-100/561
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	Sgo1 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 Plk kinetochore affinity. Sgo1 exists as seven alternatively isoforms one of which (isoform 3) does not does not localize to kinetochores during any stages of the cell cycle

Function:

Plays a central role in chromosome cohesion during mitosis by preventing premature dissociation of cohesin complex from centromeres after prophase, when most of cohesin complex dissociates from chromosomes arms. May act by preventing phosphorylation of the STAG2 subunit of cohesin complex at the centromere, ensuring cohesin persistence at centromere until cohesin cleavage by ESPL1/separase at anaphase. Essential for proper chromosome segregation during mitosis and this function requires interaction with PPP2R1A. Its phosphorylated form is necessary for chromosome congression and for the proper attachment of spindle microtubule to the kinetochore. Necessary for kinetochore localization of PLK1 and CENPF. May play a role in the tension sensing mechanism of the spindle-assembly checkpoint by regulating PLK1 kinetochore affinity. Isoform 3 plays a role in maintaining centriole cohesion involved in controlling spindle pole integrity.

Subcellular Location:

Nucleus. Chromosome > centromere. Chromosome > centromere > kinetochore. Cytoplasm > cytoskeleton > spindle pole. Cytoplasm > cytoskeleton > centrosome. Localizes to the inner centromere throughout prophase until metaphase and disappears at anaphase. During prometaphase, it localizes to a single focus, while at metaphase, it localizes to 2 spots corresponding to the 2 centromeres. Centromeric localization requires the presence of BUB1 and the interaction with PPP2R1A. Localizes to the inner kinetochore from prophase to early metaphase. Co-localizes with NEK2 and SS18L1 at the kinetochore. Phosphorylation by AUKRB and the presence of BUB1 are required for localization to the kinetochore. Isoform 1 primarily localizes to kinetochores during G2 phase and mitotic prophase, metaphase, and anaphase and does not appear to be associated with kinetochores during late mitosis. Isoform 3 is found at the centrosome in interphase and at spindle poles in mitosis and its spindle pole localization is PLK1 dependent. Isoform 3 does not localize to kinetochores during any stages of the cell cycle.

Tissue Specificity:

Widely expressed. Highly expressed in testis. Expressed in lung, small intestine, breast, liver and placenta. Strongly overexpressed in 90% of breast cancers tested.

Post-translational modifications:

Ubiquitinated and degraded during mitotic exit by APC/C-Cdh1. Phosphorylation by NEK2 is essential for chromosome congression in mitosis and for the proper

attachment of spindle microtubule to the kinetochore. Phosphorylated by PLK1 and AUKRB.

Similarity:

Belongs to the shugoshin family.

SWISS:

Q5FBB7

Gene ID:

151648

Database links:

[Entrez Gene: 151648](#) Human

[Omim: 609168](#) Human

[SwissProt: Q5FBB7](#) Human

[Unigene: 105153](#) Human

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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