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SKA3 Antibody

Catalog # ASC10983

Product Information

Application	WB, E
Primary Accession	Q8IX90
Other Accession	NP_659498, 260763910
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	46359
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	SKA3 antibody can be used for detection of SKA3 by Western blot at 0.5 - 1 □g/mL.

Additional Information

Gene ID	221150
Other Names	Spindle and kinetochore-associated protein 3, SKA3, C13orf3, RAMA1
Target/Specificity	SKA3;
Reconstitution & Storage	SKA3 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	SKA3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	SKA3
Synonyms	C13orf3, RAMA1
Function	Component of the SKA1 complex, a microtubule-binding subcomplex of the outer kinetochore that is essential for proper chromosome segregation (PubMed:19289083, PubMed:19360002, PubMed:23085020). The SKA1 complex is a direct component of the kinetochore-microtubule interface and directly associates with microtubules as oligomeric assemblies (PubMed:19289083, PubMed:19360002). The complex facilitates the processive movement of microspheres along a microtubule in a depolymerization-coupled manner (PubMed:19289083). In the complex, it mediates the microtubule- stimulated oligomerization (PubMed:19289083).

	Affinity for microtubules is synergistically enhanced in the presence of the ndc-80 complex and may allow the ndc-80 complex to track depolymerizing microtubules (PubMed:23085020).
Cellular Location	Cytoplasm, cytoskeleton, spindle. Chromosome, centromere, kinetochore Note=Localizes to the outer kinetochore and spindle microtubules during mitosis in a NDC80 complex-dependent manner

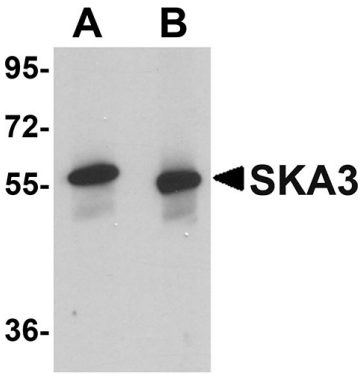
Background

SKA3 Antibody: Upon entry into mitosis, the cell's microtubule (MT) network forms the mitotic spindle, allowing the segregation of paired chromosomes. Proteinaceous structures on centromeric chromatin termed kinetochores (KT) are essential for the proper attachment of the chromosomes to the spindle MTs. A recently discovered spindle and kinetochore complex, comprised of proteins SKA1, SKA2, and SKA3, has been found to be required for stable KT-MT interactions and timely anaphase onset. Like with SKA1 or SKA2, depletion of SKA3 by siRNA delays anaphase transition, resulting in a prolonged a metaphase-like state. These SKA3-depleted cells accumulate high levels of the checkpoint protein Bub1 at kinetochores, suggesting the SKA complex plays a key role in spindle checkpoint silencing and the maintenance of chromosome cohesion in mitosis.

References

Cleveland DW, Mao Y, and Sullivan KF. Centromeres and kinetochores: from epigenetics to mitotic checkpoint signaling. Cell2003; 112:407-21.
Hanisch A, Sillje HHW, and Nigg EA. Timely anaphase onset requires a novel spindle and kinetochore complex comprising Ska1 and Ska EMBO J.2006; 25:5504-15.
Gaitanos TN, Santamaria A, Jeyaprakash AA, et al. Stable kinetochore-microtubule interactions depend on the Ska complex and its new component Ska3/C13Orf EMBO J.2009; 28:1442-52.
Daum JR, Wren JD, Daniel JJ, et al. Ska3 is required for spindle checkpoint silencing and maintenance of chromosome cohesion in mitosis. Curr. Biol.2009; 19:1467-72.

Images



Western blot analysis of SKA3 in human testis tissue lysate with SKA3 antibody at (A) 0.5 and (B) 1 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.