



Rabbit Anti-NSMCE1 antibody

SL19473R

Product Name:	NSMCE1
Chinese Name:	NSMCE1蛋白抗体
Alias:	HSPC333; HSPC337; Non SMC element 1 homolog (S. cerevisiae); Non SMC element 1 homolog; NSE1_HUMAN; Non structural maintenance of chromosomes element 1 homolog; NSE1; NSMCE 1.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Cow,
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:	31kDa
Cellular localization:	The nucleus
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human NSMCE1:21-120/266
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:	Breaks in double stranded DNA often arise during DNA replication or as a result of exposure to DNA-damaging agents. Quick and accurate repair of these breaks is crucial for cell survival and genomic stability. Structural maintenance of chromosomes (SMC) family members form heterodimeric complexes that modulate sister chromatid cohesion and chromosome condensation during mitosis. SMC5 and SMC6 play a

crucial role in DNA repair as they form a complex with six conserved nonSMC subunits, including a ubiquitin E3 ligase NSE1 and a SUMO ligase NSE2. Specifically, this complex is crucial for sister chromatid homologous recombination DNA repair and also for prevention of chromosomal rearrangements. The NSE1 protein contains a RING-like motif that promotes DNA repair functions of the SMC5/SMC6 complex and full deletion of NSE1 is lethal to cells. NSE2 stimulates sumoylation of SMC6 and the DNA repair protein TRAX. Depletion of the NSE2 protein by RNA interference leaves the cell vulnerable to DNA damage-induced apoptosis.

Function:

Component of the SMC5-SMC6 complex, a complex involved in DNA double-strand breaks by homologous recombination. The complex may promote sister chromatid homologous recombination by recruiting the SMC1-SMC3 cohesin complex to double-strand breaks. The complex is required for telomere maintenance via recombination in ALT (alternative lengthening of telomeres) cell lines and mediates sumoylation of shelterin complex (telosome) components which is proposed to lead to shelterin complex disassembly in ALT-associated PML bodies (APBs). Has in vitro ubiquitin ligase activity in presence of NDNL2. Is involved in positive regulation of response to DNA damage stimulus.

Subunit:

Component of the SMC5-SMC6 complex which consists at least of SMC5, SMC6, NSMCE2, NSMCE1, NSMCE4A or EID3 and NDNL2. NSMCE1, NSMCE4A or EID3 and NDNL2 probably form a subcomplex that bridges the head domains of the SMC5:SMC6 heterodimer.

Subcellular Location:

Nucleus. Chromosome, telomere

Post-translational modifications:

Ubiquitinated.

Similarity:

Belongs to the NSE1 family. Contains 1 NSE1-type zinc finger.

SWISS:

Q8WV22

Gene ID:

197370

Database links:

[Entrez Gene: 197370](#) Human

[Entrez Gene: 67711](#) Mouse

[Entrez Gene: 361645](#) Rat

[SwissProt: Q8WV22](#) Human

[SwissProt: Q9D720](#) Mouse

[SwissProt: Q499U6](#) Rat

[Unigene: 284295](#) Human

[Unigene: 4467](#) Mouse

[Unigene: 17063](#) Rat

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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