ARG54012
anti-SMC1A antibody (C-term)

Package: 100 µl
Store at: -20°C

Summary

Product Description	Mouse Monoclonal antibody recognizes SMC1A
Tested Reactivity	Hu
Tested Application	ICC/IF, WB
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1
Target Name	SMC1A
Species	Human
Immunogen	Purified recombinant human SMC1A(C-term.) protein fragments expressed in E.coli.
Conjugation	Un-conjugated
Alternate Names	CDLS2; SMC-1A; Structural maintenance of chromosomes protein 1A; SMC1alpha; SMC1; DXS423E; Sb1.8; SMC-1-alpha; SMC1L1; SB1.8; SMCB; SMC protein 1A

Application Instructions

Application table

Application	Dilution
ICC/IF	1:100
WB	1:1000

Application Note: * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.

Observed Size: 143 kDa

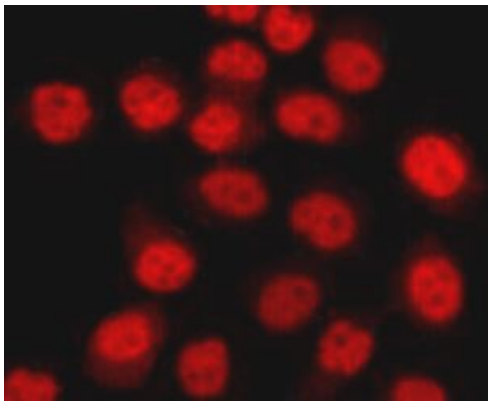
Properties

Form	Liquid
Purification	Affinity purified
Buffer	PBS (pH 7.4), 0.02% Sodium azide and 50% Glycerol
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Concentration	2 mg/ml
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

Bioinformation

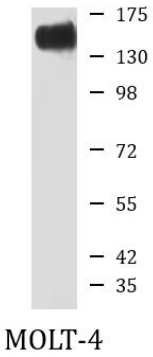
Database links	GeneID: 8243 Human Swiss-port # Q14683 Human
Gene Symbol	SMC1A
Gene Full Name	structural maintenance of chromosomes 1A
Background	Involved in chromosome cohesion during cell cycle and in DNA repair. Central component of cohesin complex. The cohesin complex is required for the cohesion of sister chromatids after DNA replication. The cohesin complex apparently forms a large proteinaceous ring within which sister chromatids can be trapped. At anaphase, the complex is cleaved and dissociates from chromatin, allowing sister chromatids to segregate. The cohesin complex may also play a role in spindle pole assembly during mitosis. Involved in DNA repair via its interaction with BRCA1 and its related phosphorylation by ATM, or via its phosphorylation by ATR. Works as a downstream effector both in the ATM/NBS1 branch and in the ATR/MSH2 branch of S-phase checkpoint.
Function	Involved in chromosome cohesion during cell cycle and in DNA repair. Central component of cohesin complex. The cohesin complex is required for the cohesion of sister chromatids after DNA replication. The cohesin complex apparently forms a large proteinaceous ring within which sister chromatids can be trapped. At anaphase, the complex is cleaved and dissociates from chromatin, allowing sister chromatids to segregate. The cohesin complex may also play a role in spindle pole assembly during mitosis. Involved in DNA repair via its interaction with BRCA1 and its related phosphorylation by ATM, or via its phosphorylation by ATR. Works as a downstream effector both in the ATM/NBS1 branch and in the ATR/MSH2 branch of S-phase checkpoint. [UniProt]
Research Area	Cell Biology and Cellular Response antibody
Calculated Mw	143 kDa
PTM	Phosphorylated by ATM upon ionizing radiation in a NBS1-dependent manner. Phosphorylated by ATR upon DNA methylation in a MSH2/MSH6-dependent manner. Phosphorylation of Ser-957 and Ser-966 activates it and is required for S-phase checkpoint activation.
Cellular Localization	Nucleus. Chromosome. Chromosome

Images



ARG54012 anti-SMC1A antibody (C-term) ICC/IF image

Immunofluorescence: HeLa cells fixed with 4% Paraformaldehyde and stained with ARG54012 anti-SMC1A antibody (C-term) at 1:100 dilution.



ARG54012 anti-SMC1A antibody (C-term) WB image

Western blot: MOLT-4 cell lysate stained with ARG54012 anti-SMC1A antibody (C-term) at 1:1000 dilution.