

Recombinant SMC1A Monoclonal Antibody

catalog number: **AN301986L**

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

Description

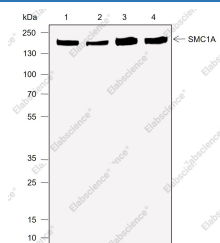
Reactivity	Human;Mouse
Immunogen	Peptide. This information is proprietary to PTMab.
Host	Rabbit
Isotype	Rabbit IgG
Clone	C231607
Purification	Protein A purified
Buffer	PBS, 50% glycerol, 0.05% Proclin 300, 0.05% protein protectant.

Applications

Recommended Dilution

WB	1:1000-1:2000
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Data



Western Blot with SMC1A Monoclonal Antibody at dilution of 1:2000. Lane 1: SW480, Lane 2: HepG2, Lane 3: 4T1, Lane 4: NIH/3T3

Observed-MW:160 kDa

Calculated-MW:141 kDa

Preparation & Storage

Storage	Store at -20°C Valid for 12 months. Avoid freeze / thaw cycles.
Shipping	Ice bag

Background

The cohesin complex consists of a heterodimer between SMC1 (SMC1A or B) and SMC3, bound by additional RAD21 and STAG proteins (STAG1, 2, or 3). These proteins form a ring-like structure that mediates the cohesion of two sister chromatids after DNA replication in S phase. RAD21 and STAG2 are phosphorylated by Polo-like kinase (PLK) during prophase, which leads to the dissociation of cohesin complexes from the chromosome arms; however, cohesin remains bound to centromeres until anaphase. RAD21 is cleaved by separin/ESPL1 in anaphase, which leads to dissociation of the remaining cohesin from centromeres, enabling sister chromatids to segregate during mitosis. RAD21 is also cleaved by caspase-3 and caspase-7 during apoptosis, resulting in a 64 kDa carboxy-terminal cleavage product that translocates to the cytoplasm and may help to trigger apoptosis. In addition to mediating cohesion of sister chromatids, the cohesin complex plays important roles in gene regulation and DNA repair, as SMC1 and SMC3 are both phosphorylated by ATM and ATR kinases upon DNA damage.

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