

Product datasheet

Anti-RanGAP1 antibody ab2081

1 References 画像数 2

製品の概要

製品名	Anti-RanGAP1 antibody
製品の詳細	Goat polyclonal to RanGAP1
由来種	Goat
特異性	There is a hypothetical protein called "similar to RANGAP1" (XP_139737.2) that is virtually identical.
アプリケーション	適用あり: WB, ICC/IF
種交差性	交差種: Mouse, Human
免疫原	Synthetic peptide: ASEDIAKLAETLAK, corresponding to N terminal amino acids 2-15 of Human RanGAP1. Run BLAST with ExPASy Run BLAST with NCBI
ポジティブ・コントロール	3T3 lysate.
特記事項	

Ran is a small signaling GTPase that is involved in nucleocytoplasmic transport. Two additional functions of animal Ran in the formation of spindle asters and the reassembly of the nuclear envelope in mitotic cells have been recently reported. In contrast to Ras or Rho, Ran is not associated with membranes. Instead, the spatial sequestering of its accessory proteins, the Ran GTPase-activating protein RanGAP 1 and the nucleotide exchange factor RCC1, appears to define the local concentration of RanGTP vs. RanGDP involved in signaling. Mammalian RanGAP 1 is bound to the nuclear pore by a mechanism involving the attachment of small ubiquitin-related modifier protein (SUMO) to its C terminus and the subsequent binding of the SUMOylated domain to the nucleoporin Nup358.

製品の特性

製品の状態	Liquid
保存方法	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
バッファー	pH: 7.30 Preservative: 0.02% Sodium azide Constituents: Tris buffered saline, 0.5% BSA
精製度	Immunogen affinity purified
特記事項 (精製)	Purified from goat serum by ammonium sulphate precipitation followed by antigen affinity

chromatography using the immunizing peptide.

一次抗体 備考

Ran is a small signaling GTPase that is involved in nucleocytoplasmic transport. Two additional functions of animal Ran in the formation of spindle asters and the reassembly of the nuclear envelope in mitotic cells have been recently reported. In contrast to Ras or Rho, Ran is not associated with membranes. Instead, the spatial sequestering of its accessory proteins, the Ran GTPase-activating protein RanGAP 1 and the nucleotide exchange factor RCC1, appears to define the local concentration of RanGTP vs. RanGDP involved in signaling. Mammalian RanGAP 1 is bound to the nuclear pore by a mechanism involving the attachment of small ubiquitin-related modifier protein (SUMO) to its C terminus and the subsequent binding of the SUMOylated domain to the nucleoporin Nup358.

ポリモノ

ポリクローナル

アイソタイプ

IgG

アプリケーション

Our [Abpromise guarantee](#) covers the use of **ab2081** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

アプリケーション	Abreviews	特記事項
WB		Use a concentration of 0.1 - 0.5 µg/ml. Detects a band of approximately 70 kDa. Can be blocked with Human RanGAP1 peptide (ab22867) . Detects a band of approximately 70 kDa in human brain lysates and 3T3 lysates (predicted MW of 68kDa according to NP_002874).
ICC/IF		1/500.

ターゲット情報

機能

GTPase activator for the nuclear Ras-related regulatory protein Ran, converting it to the putatively inactive GDP-bound state.

組織特異性

Highly expressed in brain, thymus and testis.

配列類似性

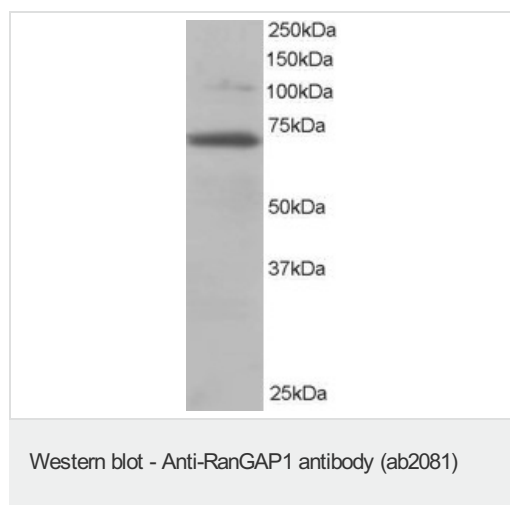
Belongs to the RNA1 family.
Contains 6 LRR (leucine-rich) repeats.

翻訳後修飾

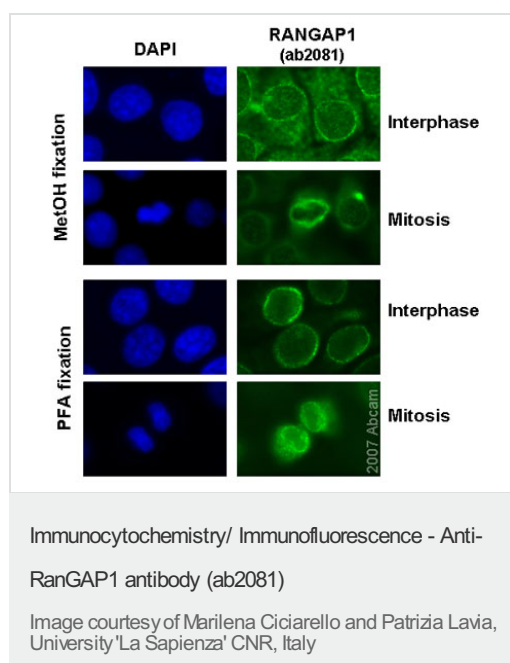
Phosphorylated occurs before nuclear envelope breakdown and continues throughout mitosis. Phosphorylated by the M-phase kinase cyclin B/Cdk1, in vitro. Differential timing of dephosphorylation occurs during phases of mitosis. The phosphorylated form remains associated with RANBP2/NUP358 and the SUMO E2-conjugating enzyme, UBC9, on nuclear pore complex (NPC) disassembly and during mitosis.
Sumoylated with SUMO1. Sumoylation is necessary for targeting to the nuclear envelope (NE), and for association with mitotic spindles and kinetochores during mitosis. Also required for interaction with RANBP2 and is mediated by UBC9.

細胞内局在

Cytoplasm. Nucleus membrane. Chromosome, centromere, kinetochore. Cytoplasm, cytoskeleton, spindle pole. Cytoplasmic during interphase. Targeted to the nuclear rim after sumoylation. During mitosis, associates with mitotic spindles. Association with kinetochores appears soon after nuclear envelope breakdown and persists until late anaphase. Mitotic location also requires sumoylation.



ab2081 at a concentration of 0.2µg/ml staining approximately 70kda RanGAP1 in 3T3 whole cell lysate (RIPA buffer, 35µg total protein per lane) by Western blot (ECL). Primary incubation = 1 hour. ab2081 at a concentration of 0.2µg/ml staining approximately 70kda RanGAP1 in 3T3 whole cell lysate (RIPA buffer, 35µg total protein per lane) by Western blot (ECL). Primary incubation = 1 hour.



ab2081 (1/500) detecting RanGap1 in mitotic and interphase HeLa cells (green). Dapi was used as counterstain in order to highlight the nucleus (blue) and cells were fixed both in Methanol (-20 °C/ 6 mins, followed by 3 washes in PBS) or Paraformaldehyde (3,7% PFA /10 min at room temperature, 0,1% Triton/PBS 5 min, glycine 5 min, followed by 3 washes in PBS); This antibody also gave good results in NIH-3T3 cells under both the above mentioned fixation procedures (data not shown).

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