

Product datasheet

Anti-RanGAP1 antibody ab4784

4 References 3 图像

概述

<b>产品名称</b>	Anti-RanGAP1抗体
<b>描述</b>	兔多克隆抗体to RanGAP1
<b>宿主</b>	Rabbit
<b>经测试应用</b>	<b>适用于:</b> IHC-P, ICC/IF, WB
<b>种属反应性</b>	<b>与反应:</b> Mouse, Human, Xenopus laevis
<b>免疫原</b>	Synthetic peptide mixture: CHWSDMFTGRLRPEI (amino acids 82-96) and CPSPEKLVRMGPRRSA (amino acids 434-448) from Xenopus laevis <a href="#">Run BLAST with ExPASy</a> <a href="#">Run BLAST with NCBI</a>

常规说明

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.

性能

<b>形式</b>	Liquid
<b>存放说明</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>存储溶液</b>	Preservative: 0.1% Sodium Azide Constituents: PBS, Whole Serum
<b>纯度</b>	Whole antiserum
<b>Primary antibody说明</b>	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.

**克隆** 多克隆  
**同种型** IgG

## 应用

Our [Abpromise guarantee](#) covers the use of **ab4784** in the following tested applications.

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

应用	Ab评论	说明
IHC-P		Use at an assay dependent concentration.
ICC/IF		Use at an assay dependent concentration.
WB		1/500 - 1/1000. Detects a band of approximately 60 kDa.

## 靶标

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

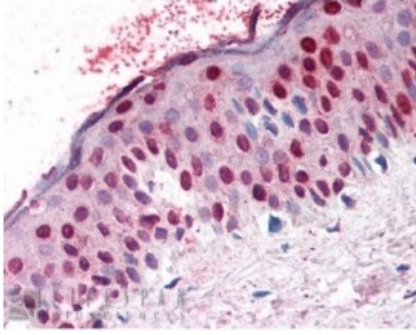
**组织特异性** Highly expressed in brain, thymus and testis.

**序列相似性** Belongs to the RNA1 family.  
Contains 6 LRR (leucine-rich) repeats.

**翻译后修饰** 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.

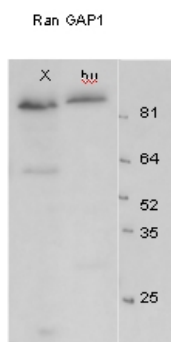
**细胞定位** Cytoplasm. Nucleus membrane. Chromosome, centromere, kinetochore. Cytoplasm, cytoskeleton, spindle pole. Cytoplasmic during interphase. Targeted to the nuclear rim after sumoylation. During mitosis, associates with mitotic spindles. Association with kinetochores appears soon after nuclear envelope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

## 图片



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-RanGAP1 antibody (ab4784)

ab4784 staining RanGAP1 on skin tissue by Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections)



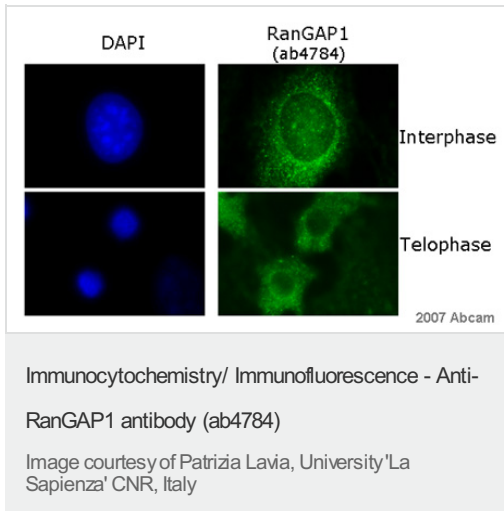
Western blot - Anti-RanGAP1 antibody (ab4784)

ab4784 at a 1/500 dilution staining approximately 90kDa RanGAP 1 in Xenopus egg extract (lane X, 50µg per lane) and HeLa total cell extract (lane Hu, 50µg per lane) by western blot (ECL, 1 minute exposure).

NB: RanGAP 1 in the above blot is modified by the addition of the SUMO-modifier peptide, so runs at approximately 90 kDa. The smaller band visible in the Xenopus lane at approximately 60 kDa is likely to be a small amount of non-SUMOylated protein.

ab4784 at a 1/500 dilution staining approximately 90kDa RanGAP 1 in Xenopus egg extract (lane X, 50µg per lane) and HeLa total cell extract (lane Hu, 50µg per lane) by western blot (ECL, 1 minute exposure).

NB: RanGAP 1 in the above blot is modified by the addition of the SUMO-modifier peptide, so runs at approximately 90 kDa. The smaller band visible in the Xenopus lane at approximately 60 kDa



ab4784 (1/50) staining RanGap1 in mouse NIH-3T3 cells (green). Cells were fixed in methanol (-20°C/ 6 mins, followed by 3 washes in PBS) and DAPI was used as counterstain in order to highlight the nucleus (blue);

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