Product datasheet

Anti-RAN Antibody

Catalog Number: *A00204-1*

BOSTER
antibody and ELISA experts
BOSTER BIOLOGICAL TECHNOLOGY
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Basic Information

Product Name	Anti-RAN Antibody
Gene Name	RAN
Source	Rabbit
Clonality	Polyclonal
Isotype	IgG
Species Reactivity	human, mouse, rat
Tested Application	WB, IHC, ICC/IF, IP, FCM
Contents	500 ug/ml antibody with PBS, 0.02% NaN3, 1 mg/ml BSA and 50% glycerol.
Immunogen	E. coli-derived human Ran recombinant protein (Position: A2-L216). Human Ran shares 100% amino acid (aa) sequence identity with both mouse and rat Ran.
Concentration	500 ug/ml
Purification	Immunogen affinity purified.
Observed MW	24 kDa
Dilution Ratios	Western blot (WB): 1:500-2000 Immunohistochemistry (IHC): 1:50-400 Immunocytochemistry/Immunofluorescence (ICC/IF): 1:50-400 ImmunoPrecipitation (IP): 1:250-300 Flow Cytometry (Fixed): 1:50-200 (Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.

Storage

12 months from date of receipt，-20℃ as supplied.

Background Information

RAN (ras-related nuclear protein) is a small GTP binding protein belonging to the RAS superfamily that is essential for the translocation of RNA and proteins through the nuclear pore complex. The RAN protein is also involved in control of DNA synthesis and cell cycle progression. Nuclear localization of RAN requires the presence of regulator of chromosome condensation 1 (RCC1). Mutations in RAN disrupt DNA synthesis. Because of its many functions, it is likely that RAN interacts with several other proteins. RAN regulates formation and organization of the microtubule network

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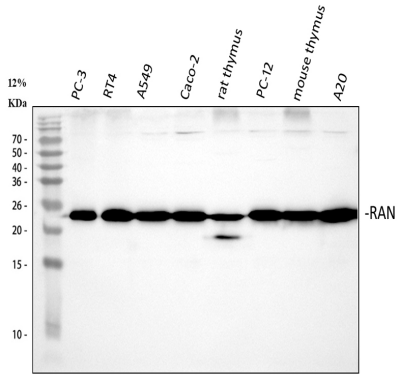
independently of its role in the nucleus-cytosol exchange of macromolecules. RAN could be a key signaling molecule regulating microtubule polymerization during mitosis. RCC1 generates a high local concentration of RAN-GTP around chromatin which, in turn, induces the local nucleation of microtubules. RAN is an androgen receptor (AR) coactivator that binds differentially with different lengths of polyglutamine within the androgen receptor. Polyglutamine repeat expansion in the AR is linked to Kennedy's disease (X-linked spinal and bulbar muscular atrophy). RAN coactivation of the AR diminishes with polyglutamine expansion within the AR, and this weak coactivation may lead to partial androgen insensitivity during the development of Kennedy's disease.

Reference

Anti-RAN Antibody被引用在1文献中。

Selected Validation Data



Western blot analysis of RAN using anti-RAN antibody (A00204-1). The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human PC-3 whole cell lysates,
Lane 2: human RT4 whole cell lysates,
Lane 3: human A549 whole cell lysates,
Lane 4: human Caco-2 whole cell lysates,
Lane 5: rat thymus tissue lysates,
Lane 6: rat PC-12 whole cell lysates,
Lane 7: mouse thymus tissue lysates,
Lane 8: mouse A20 whole cell lysates.
After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-RAN antigen affinity purified polyclonal antibody (A00204-1) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for RAN at approximately 24 kDa. The expected band size for RAN is at 24 kDa.

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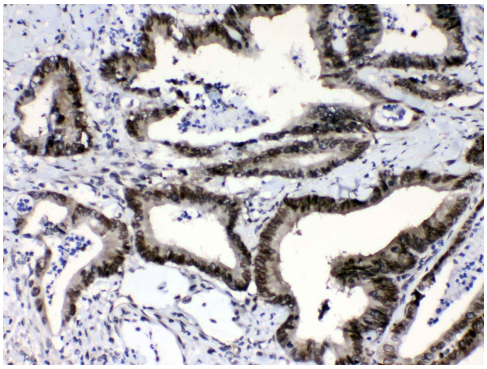
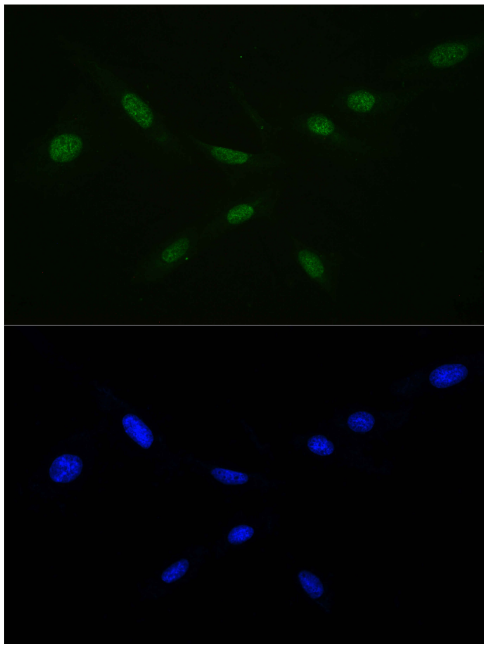
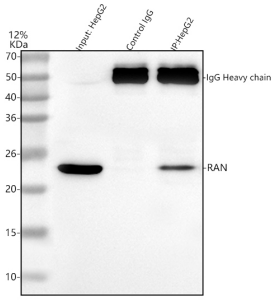


IHC analysis of RAN using anti-RAN antibody (A00204-1).
RAN was detected in a paraffin-embedded section of human intestinal cancer tissue. Biotinylated goat anti-rabbit IgG was used as secondary antibody. The tissue section was incubated with rabbit anti-RAN Antibody (A00204-1) at a dilution of 1:200 and developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB (Catalog # AR1027) as the chromogen.



ICC/IF analysis of Ran using anti- Ran antibody (A00204-1)
Ran was detected in immunocytochemical section of U2OS cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2µg/mL rabbit anti- Ran Antibody (A00204-1) overnight at 4°C. Fluoro488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IP analysis of RAN using anti-RAN antibody (A00204-1) in HepG2 whole cell lysate.
Western blot analysis of RAN using anti- RAN antibody (A00204-1).
Lane 1: HepG2 whole cell lysates(30ug),
Lane 2: Rabbit control IgG instead of anti- RAN antibody in HepG2 whole cell lysate,
Lane 3: anti- RAN antibody (2µg) + HepG2 whole cell lysate (500µg).
After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti- RAN antigen affinity purified polyclonal antibody (A00204-1) at a dilution of 1:1000 and probed with a goat anti-rabbit IgG-HRP secondary

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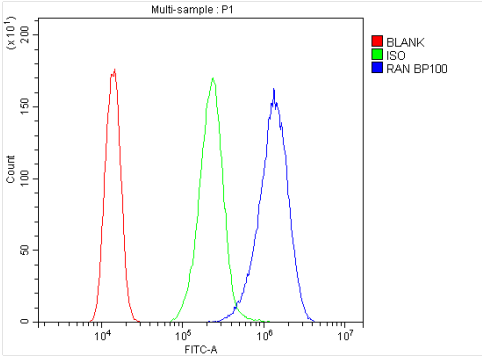
antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1197). A specific band was detected for RAN at approximately 24 kDa. The expected band size for RAN is at 24 kDa.



Flow Cytometry analysis of A431 cells using anti-RAN antibody (A00204-1).
Overlay histogram showing A431 cells stained with A00204-1 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-RAN Antibody (A00204-1) at 1:100 dilution for 30 min at 20°C. Fluoro488 conjugated goat anti-rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG at 1:100 dilution used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.