

## ARG40977 anti-Ran antibody

Package: 50 µg  
Store at: -20°C

### Summary

Product Description	Rabbit Polyclonal antibody recognizes Ran
Tested Reactivity	Hu, Ms, Rat
Tested Application	FACS, ICC/IF, IHC-P, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	Ran
Species	Human
Immunogen	Recombinant protein corresponding to A2-L216 of Human Ran.
Conjugation	Un-conjugated
Alternate Names	GTP-binding nuclear protein Ran; Androgen receptor-associated protein 24; TC4; ARA24; Ras-like protein TC4; Gsp1; Ras-related nuclear protein; GTPase Ran

### Application Instructions

Application table	Application	Dilution
	FACS	1 - 3 µg/10 <sup>6</sup> cells
	ICC/IF	1:200 - 1:1000
	IHC-P	1:200 - 1:1000
	WB	1:500 - 1:2000
Application Note	IHC-P: Antigen Retrieval: Heat mediation was performed in Citrate buffer (pH 6.0, epitope retrieval solution) for 20 min. * The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

### Properties

Form	Liquid
Purification	Affinity purification with immunogen.
Buffer	0.2% Na <sub>2</sub> HPO <sub>4</sub> , 0.9% NaCl, 0.05% Sodium azide and 5% BSA.
Preservative	0.05% Sodium azide
Stabilizer	5% BSA
Concentration	0.5 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 or below. Storage in frost free freezers is not recommended. Avoid repeated

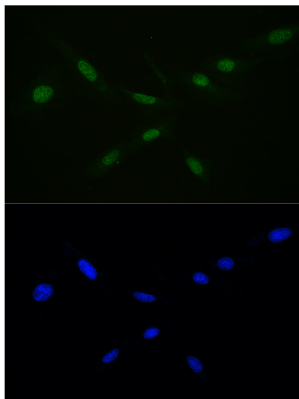
freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.

**Note** For laboratory research only, not for drug, diagnostic or other use.

## Bioinformation

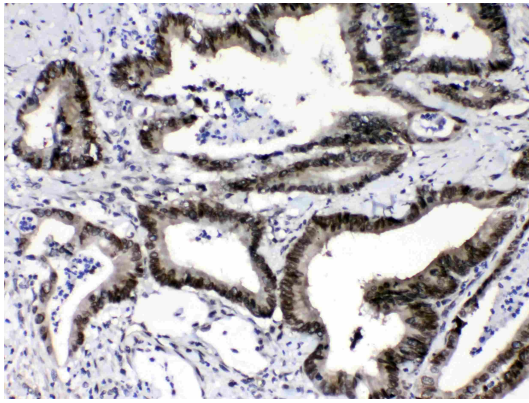
Gene Symbol	RAN
Gene Full Name	RAN, member RAS oncogene family
Background	<p>RAN (ras-related nuclear protein) is a small GTP binding protein belonging to the RAS superfamily that is essential for the translocation of RNA and proteins through the nuclear pore complex. The RAN protein is also involved 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 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. [provided by RefSeq, Jul 2008]</p>
Function	<p>GTP-binding protein involved in nucleocytoplasmic transport. Required for the import of protein into the nucleus and also for RNA export. Involved in chromatin condensation and control of cell cycle (By similarity). The complex with BIRC5/ survivin plays a role in mitotic spindle formation by serving as a physical scaffold to help deliver the RAN effector molecule TPX2 to microtubules. Acts as a negative regulator of the kinase activity of VRK1 and VRK2.</p> <p>Enhances AR-mediated transactivation. Transactivation decreases as the poly-Gln length within AR increases. [UniProt]</p>
Calculated Mw	24 kDa
Cellular Localization	<p>Nucleus. Nucleus envelope. Cytoplasm, cytosol. Cytoplasm. Melanosome. Note=Predominantly nuclear during interphase (PubMed:8421051, PubMed:12194828, PubMed:10679025). Becomes dispersed throughout the cytoplasm during mitosis (PubMed:8421051, PubMed:12194828). Identified by mass spectrometry in melanosome fractions from stage I to stage IV (PubMed:17081065). [UniProt]</p>

## Images



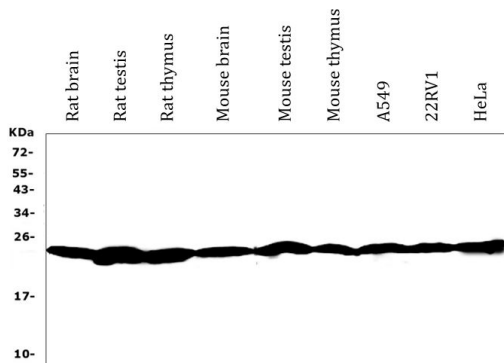
ARG40977 anti-Ran antibody ICC/IF image

Immunofluorescence: U2OS cells stained with ARG40977 anti-Ran antibody (green) at 2 µg/ml, overnight at 4°C. DAPI (blue) for nuclear staining.



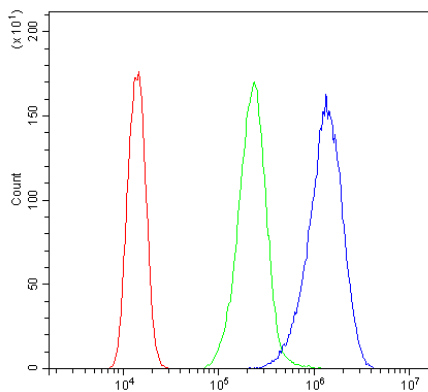
ARG40977 anti-Ran antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human intestinal cancer tissue. Antigen Retrieval: Heat mediation was performed in Citrate buffer (pH 6.0, epitope retrieval solution) for 20 min. The tissue section was blocked with 10% goat serum. The tissue section was then stained with ARG40977 anti-Ran antibody at 1 µg/ml dilution, overnight at 4°C.



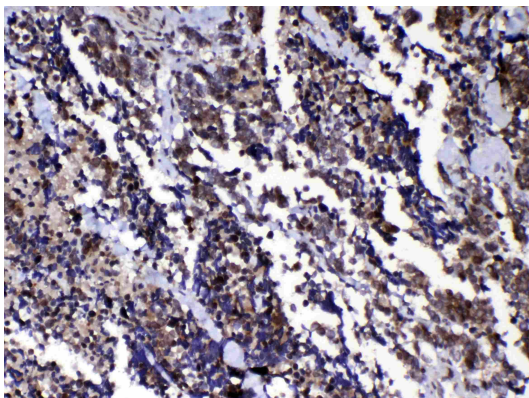
ARG40977 anti-Ran antibody WB image

Western blot: 50 µg of samples under reducing conditions. Rat brain, Rat testis, Rat thymus, Mouse brain, Mouse testis, Mouse thymus, A549, 22RV1 and HeLa whole cell lysates stained with ARG40977 anti-Ran antibody at 0.5 µg/ml, overnight at 4°C.



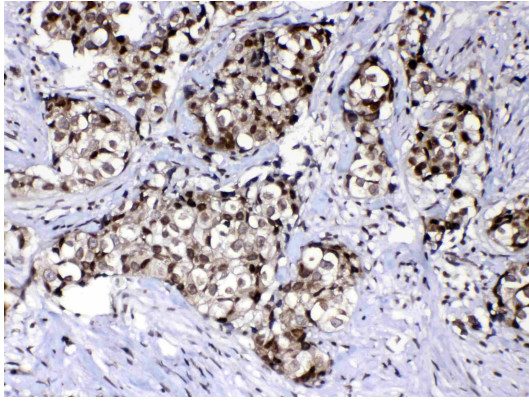
ARG40977 anti-Ran antibody FACS image

Flow Cytometry: A431 cells were blocked with 10% normal goat serum and then stained with ARG40977 anti-Ran antibody (blue) at 1 µg/10<sup>6</sup> cells for 30 min at 20°C, followed by incubation with DyLight<sup>®</sup>488 labelled secondary antibody. Isotype control antibody (green) was Rabbit IgG (1 µg/10<sup>6</sup> cells) used under the same conditions. Unlabelled sample (red) was also used as a control.



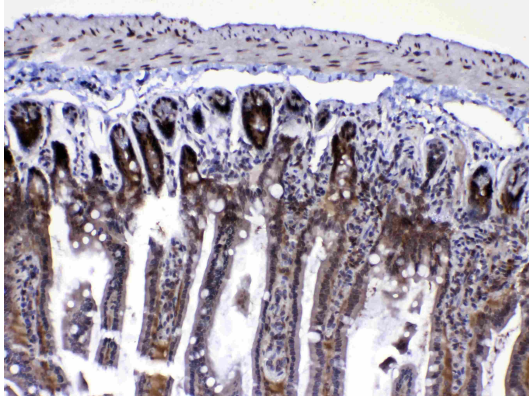
ARG40977 anti-Ran antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human lung cancer tissue. Antigen Retrieval: Heat mediation was performed in Citrate buffer (pH 6.0, epitope retrieval solution) for 20 min. The tissue section was blocked with 10% goat serum. The tissue section was then stained with ARG40977 anti-Ran antibody at 1 µg/ml dilution, overnight at 4°C.



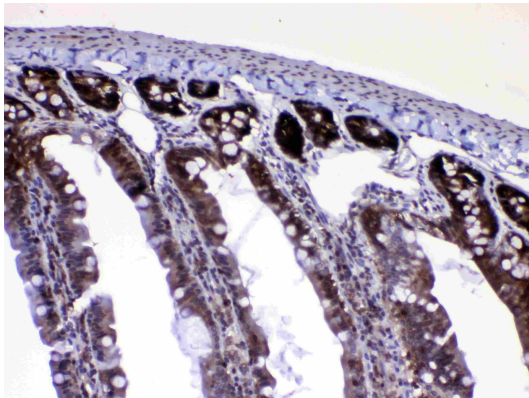
ARG40977 anti-Ran antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Human mammary cancer tissue. Antigen Retrieval: Heat mediation was performed in Citrate buffer (pH 6.0, epitope retrieval solution) for 20 min. The tissue section was blocked with 10% goat serum. The tissue section was then stained with ARG40977 anti-Ran antibody at 1  $\mu\text{g}/\text{ml}$  dilution, overnight at 4°C.



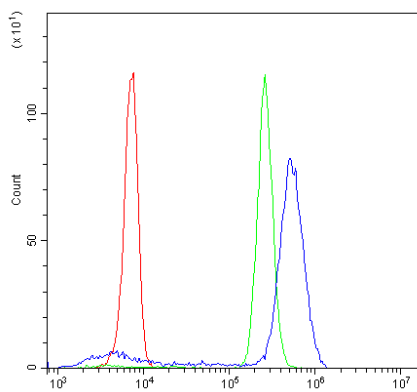
ARG40977 anti-Ran antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Mouse small intestine tissue. Antigen Retrieval: Heat mediation was performed in Citrate buffer (pH 6.0, epitope retrieval solution) for 20 min. The tissue section was blocked with 10% goat serum. The tissue section was then stained with ARG40977 anti-Ran antibody at 1  $\mu\text{g}/\text{ml}$  dilution, overnight at 4°C.



ARG40977 anti-Ran antibody IHC-P image

Immunohistochemistry: Paraffin-embedded Rat small intestine tissue. Antigen Retrieval: Heat mediation was performed in Citrate buffer (pH 6.0, epitope retrieval solution) for 20 min. The tissue section was blocked with 10% goat serum. The tissue section was then stained with ARG40977 anti-Ran antibody at 1  $\mu\text{g}/\text{ml}$  dilution, overnight at 4°C.



ARG40977 anti-Ran antibody FACS image

Flow Cytometry: U937 cells were blocked with 10% normal goat serum and then stained with ARG40977 anti-Ran antibody (blue) at 1  $\mu\text{g}/10^6$  cells for 30 min at 20°C, followed by incubation with DyLight®488 labelled secondary antibody. Isotype control antibody (green) was Rabbit IgG (1  $\mu\text{g}/10^6$  cells) used under the same conditions. Unlabelled sample (red) was also used as a control.