

Product name:	Ran Rabbit Polyclonal Antibody
Cat number:	ABN16880
Conjugate:	Unconjugated
Size:	100μL
Clone:	Polyclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	The antiserum was produced against synthesized peptide derived from human RAN. AA range:167-216
Reactivity:	Human,Mouse,Rat
Applications:	WB 1:500-1:2000,IHC 1:100-1:300,ICC/IF 1:50-1:200,ELISA 1:5000-1:20000
Molecular Weight:	25kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% New type preservative N.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

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 refunction: Enhances AR-mediated transactivation. Transactivation decreases as the poly-Gln length within AR increases. function: 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. PTM: The N-terminus is blocked. similarity: Belongs to the small GTPase superfamily. Ran family. subcellular location: Becomes dispersed throughout the cytoplasm during mitosis. Identified by mass spectrometry in melanosome fractions from stage I to stage IV. subunit: Monomer. Also forms a complex with CHC1 and interacts with the AR N-terminal poly-Gln region. The interaction with AR is inversely correlated with the poly-Gln length. Part of a complex consisting of RANBP9, Ran, DYRK1B and COPS5. Found in a nuclear export complex with RANBP3 and XPO1. Component of a nuclear export receptor complex composed of KPNB1, Ran, SNUPN and XPO1. Found in a trimeric export complex with SNUPN, Ran and XPO1. Interacts with RANBP10. In case of HIV-1 infection, found in a complex with HIV-1 Rev, RNAs containing a Rev response element (RRE) and XPO1. Found in a complex with HTLV-1 Rex, RANBP3 and XPO1. tissue specificity: Expressed in a variety of tissues.