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Anti-Ran Monoclonal Antibody
Catalog # ABO14456

Specification

Anti-Ran Monoclonal Antibody - Product Information

Application	**WB, IF, ICC, IP, FC**
Primary Accession	P62826
Host	**Rabbit**
Isotype	**Rabbit IgG**
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Format	**Liquid**

Description
Anti-Ran Monoclonal Antibody . Tested in WB, ICC/IF, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat.

Anti-Ran Monoclonal Antibody - Additional Information

Gene ID 5901

Other Names
GTP-binding nuclear protein Ran, 3.6.5.-, Androgen receptor-associated protein 24, GTPase Ran, Ras-like protein TC4, Ras-related nuclear protein, RAN, ARA24 {ECO:0000303|PubMed:10400640}

Application Details
WB 1:500-1:2000
ICC/IF 1:50-1:200
IP 1:50
FC 1:100

Contents
Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.

Immunogen
A synthesized peptide derived from human Ran 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).

Purification
Affinity-chromatography

Storage	**Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.**

Anti-Ran Monoclonal Antibody - Protein Information

Name RAN

Synonyms ARA24 {ECO:0000303|PubMed:10400640}

Function
GTPase involved in nucleocytoplasmic transport, participating both to the import and the export from the nucleus of proteins and RNAs (PubMed:10400640, PubMed:17209048, PubMed:26272610, PubMed:27306458, PubMed:8276887, PubMed:8636225, PubMed:8692944, PubMed:8896452, PubMed:9351834, PubMed:9428644, PubMed:9822603). Switches between a cytoplasmic GDP- and a nuclear GTP-bound state by nucleotide exchange and GTP hydrolysis (PubMed:11336674, PubMed:26272610, PubMed:29040603, PubMed:7819259, PubMed:8636225, PubMed:8692944, PubMed:8896452, PubMed:9351834, PubMed:9428644, PubMed:9822603). Nuclear import receptors such as importin beta bind their substrates only in the absence of GTP-bound RAN and release them upon direct interaction with GTP-bound RAN, while export receptors behave in the opposite way. Thereby, RAN controls cargo loading and release by transport receptors in the proper compartment and ensures the directionality of the transport (PubMed:8896452, PubMed:9351834, PubMed:9428644). Interaction with RANBP1 induces a conformation change in the complex formed by XPO1 and RAN that triggers the release of the nuclear export signal of cargo proteins (PubMed:20485264). RAN (GTP-bound form) triggers microtubule assembly at mitotic chromosomes and is required for normal mitotic spindle assembly and chromosome segregation (PubMed:10408446, PubMed:29040603). Required for normal progress through mitosis (PubMed:12194828, PubMed:29040603, PubMed:8421051). 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 (PubMed:18591255). Acts as a negative regulator of the kinase activity of VRK1 and VRK2 (PubMed:18617507). Enhances AR- mediated transactivation. Transactivation decreases as the poly-Gln length within AR increases (PubMed:10400640).

Cellular Location
Nucleus. Nucleus envelope. Cytoplasm, cytosol Cytoplasm. Melanosome Note=Predominantly nuclear during interphase (PubMed:10679025, PubMed:12194828, PubMed:8421051). Becomes

dispersed throughout the cytoplasm during mitosis (PubMed:12194828, PubMed:8421051). Identified by mass spectrometry in melanosome fractions from stage I to stage IV (PubMed:17081065).

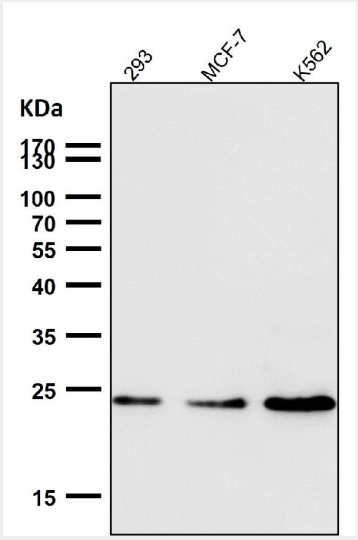
Tissue Location
Expressed in a variety of tissues.

Anti-Ran Monoclonal Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Ran Monoclonal Antibody - Images



All lanes use the Antibody at 1:1W dilution for 1 hour at room temperature.

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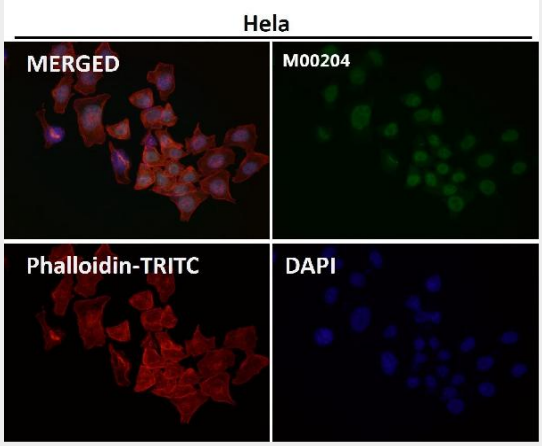
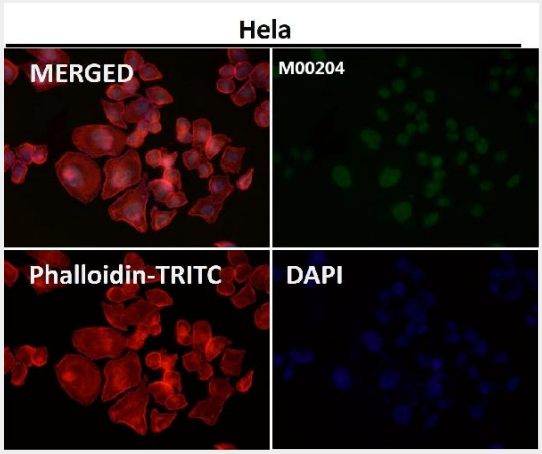
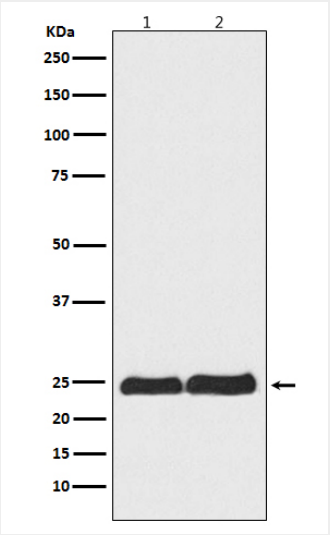


Immunofluorescent analysis using the Antibody at 1:150 dilution.



Immunofluorescent analysis using the Antibody at 1:500 dilution.



Western blot analysis of Ran expression in (1)HeLa cell lysate; (2)RAW264.7 cell lysate.