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#4462

Ran Antibody

For Research Use Only. Not for Use in Diagnostic Procedures.

| Applications: | Reactivity: | Sensitivity: | MW (kDa): | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---------------|---------------|--------------|-----------|-----------------|-------------|-----------------|
| W | H M R Hm Mk B | Endogenous | 24 | Rabbit | #P62826 | 5901 |

Product Usage Information

Application

Western Blotting

Dilution

1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Ran Antibody detects endogenous levels of total Ran protein. The antibody does not cross-react with other small GTPases of the Ras family.

Species predicted to react based on 100% sequence homology

D. melanogaster, Xenopus

Source / Purification

Polyclonal antibodies are produced by immunizing animals with two synthetic peptides corresponding to amino acids surrounding Arg29 and Asn143 of human Ran. Antibodies are purified by protein A and peptide affinity chromatography.

Background

Ran is a small GTPase of the Ras family that plays a central role in the spacial and temporal organization of eukaryotic cells. During interphase, Ran-GDP localizes to the cytoplasm and Ran-GTP to the nucleus. This polarized localization of Ran ensures its role in nuclear transport (1). During mitosis, Ran-GTP is chromatin associated, where it promotes spindle assembly and nuclear envelope formation (1,2). In S phase, Ran-GTP associates with and inhibits MCM helicase, ensuring precise chromosomal DNA duplication during the cell cycle (3).

Background References

1. Quimby, B.B. and Dasso, M. (2003) *Curr. Opin. Cell Biol.* 15, 338-344.
2. Hetzer, M. et al. (2002) *Nat. Cell Biol.* 4, 177-184.
3. Yamaguchi, R. and Newport, J. (2003) *Cell* 113, 115-125.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween@ 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human **M:** Mouse **R:** Rat **Hm:** Hamster **Mk:** Monkey **B:** Bovine

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