RCC1 (D15H6) Rabbit mAb

**Background:** The Ras family small GTPase Ran is involved in nuclear envelope formation, assembly of the mitotic spindle and nuclear transport (1,2). Like other small GTPases, Ran is active in its GTP-bound form and inactive in its GDP-bound form. Nuclear RanGTP concentration is maintained through nuclear localization of guanine nucleotide exchange factor (GEF) activity, which catalyzes the exchange of bound GDP for GTP.

RCC1 (regulator of chromatin condensation 1) is the only known RanGEF (3). RCC1 is dynamically chromatin-bound throughout the cell cycle, and this localization is required for mitosis to proceed normally (4,5). Appropriate association of RCC1 with chromatin is regulated through amino-terminal phosphorylation (5,6) and methylation (7). RCC1 regulation of RanGTP levels in response to histone modifications regulates nuclear import during apoptosis (8). In mitosis RCC1 is phosphorylated at Ser11, possibly by cyclinB/cdc2 (9-11). This phosphorylation may play a role in RCC1 interaction with chromatin and its RanGEF activity (6).

**Specificity/Sensitivity:** RCC1 (D15H6) Rabbit mAb detects endogenous levels of total RCC1 protein.

**Source/Purification:** Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to central residues of human RCC1 protein.

**Applications**

- **Western Blotting (W)**
- **Immunofluorescence (IF-IC)**
- **Immunohistochemistry (IHC)**
- **Chromatin Immunoprecipitation (ChIP)**
- **Immunoprecipitation (IP)**
- **Flow Cytometry (F)**

**Species Cross-Reactivity**

- Human (H)  
- Mouse (M)  
- Rat (R)  
- Monkey (Mk)

**Molecular Wt.** 45 kDa

**Isotype** Rabbit IgG

**Recommended Antibody Dilutions:**

- Western blotting: 1:1000
- Immunofluorescence (IF-IC): 1:50

**IF Protocol:** Methanol Fixation required

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at −20°C. Do not aliquot the antibody.

**Speciation:**

- Anti-rabbit secondary antibodies must be used to detect this antibody.

**Recommended Companion Products**

- Cell Signaling Technology provides a complete listing of recommended companion products.

**Suppliers:**

- **Orders:** 877-616-CELL (2355)  
  orders@cellsignal.com
- **Support:** 877-678-TECH (8324)  
  info@cellsignal.com
- **Web:** www.cellsignal.com

**Important Note:**

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

**Species Cross-Reactivity Key:**

- Human (H)  
- Mouse (M)  
- Rat (R)  
- Monkey (Mk)

**Applications Key:**

- Western (W)  
- Immunoprecipitation (IP)  
- Immunohistochemistry (IHC)  
- Chromatin Immunoprecipitation (ChIP)  
- Immunofluorescence (IF)  
- Flow Cytometry (F)  
- ELISA-Peptide (E-P)

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**Entrez-Gene ID:** #1104  
**UniProt ID:** #P18754

**References:**