



**Orders:** 877-616-CELL (2355)  
orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com  
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

Store at -20C  
#5134

## RCC1 (D15H6) Rabbit mAb

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

<b>Applications:</b> W, IF-IC	<b>Reactivity:</b> H M R Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 45	<b>Source/Isotype:</b> Rabbit IgG	<b>UniProt ID:</b> #P18754	<b>Entrez-Gene Id:</b> 1104
----------------------------------	--------------------------------	-----------------------------------	------------------------	--------------------------------------	-------------------------------	--------------------------------

### Product Usage Information

#### Application

Western Blotting  
Immunofluorescence (Immunocytochemistry)

#### Dilution

1:1000  
1:50

### 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.

### 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.

### 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. Regulator of chromatin condensation 1 (RCC1) 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 cyclin B/cdc2 (9-11). This phosphorylation may play a role in RCC1 interaction with chromatin and RCC1 RanGEF activity (6).

### Background References

1. Quimby, B.B. and Dasso, M. (2003) *Curr Opin Cell Biol* 15, 338-44.
2. Hetzer, M. et al. (2002) *Nat Cell Biol* 4, E177-84.
3. Moore, W. et al. (2002) *Curr Biol* 12, 1442-7.
4. Ohtsubo, M. et al. (1989) *J Cell Biol* 109, 1389-97.
5. Li, H.Y. and Zheng, Y. (2004) *Genes Dev* 18, 512-27.
6. Hutchins, J.R. et al. (2004) *Curr Biol* 14, 1099-104.
7. Chen, T. et al. (2007) *Nat Cell Biol* 9, 596-603.
8. Wong, C.H. et al. (2009) *Nat Cell Biol* 11, 36-45.
9. Horiike, Y. et al. (2009) *Mol Biol Rep* 36, 717-23.
10. Dephoure, N. et al. (2008) *Proc Natl Acad Sci U S A* 105, 10762-7.
11. Hood, F.E. and Clarke, P.R. (2007) *J Cell Sci* 120, 3436-45.

### 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 **IF-IC:** Immunofluorescence (Immunocytochemistry)

### Cross-Reactivity Key

**H:** Human **M:** Mouse **R:** Rat **Mk:** Monkey

### Trademarks and Patents

Cell Signaling Technology is a trademark of Cell Signaling Technology, Inc.

All other trademarks are the property of their respective owners. Visit [cellsignal.com/trademarks](http://cellsignal.com/trademarks) for more information.

### Limited Uses

Except as otherwise expressly agreed in a writing signed by a legally authorized representative of CST, the following terms apply to Products provided by CST, its affiliates or its distributors. Any Customer's

terms and conditions that are in addition to, or different from, those contained herein, unless separately accepted in writing by a legally authorized representative of CST, are rejected and are of no force or effect.

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.