Revision 1

Store at -20C

#5500

Phospho-RCC1 (Ser11) (D18B5) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	45	Rabbit IgG	#P18754	1104

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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

Phospho-RCC1 (Ser11) (D18B5) Rabbit mAb recognizes endogenous levels of RCC1 protein only when phosphorylated at Ser11.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ser11 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

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7. Chen, T. et al. (2007) *Nat Cell Biol* 9, 596-603.
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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

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Limited Uses

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