Revision 7

Store at -20C

#20459

FoxM1 (D3F2B) Rabbit mAb

Cell Signaling TECHNOLOGY®

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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W, IP, IHC-P, ChIP	H	Endogenous	110	Rabbit IgG	#Q08050	2305

Product Usage Information

For optimal ChIP results, use 5uL of antibody and 10ug of chromatin (approximately 4 x 10^6 cells) per IP. This antibody has been validated using SimpleChIP® Enzymatic Chromatin IP Kits.

Application	Dilution
Western Blotting	1:1000
Immunoprecipitation	1:50
Immunohistochemistry (Paraffin)	1:300 - 1:1200
Chromatin IP	1:100

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.

For a carrier free (BSA and azide free) version of this product see product #40826.

Specificity/Sensitivity

FoxM1 (D3F2B) Rabbit mAb recognizes endogenous levels of total FoxM1 protein.

Source / Purification

Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Val699 of human FoxM1 protein.

Background

Forkhead box M1 (FoxM1) is a forkhead box family transcription factor that regulates a number of genes throughout the cell cycle to help control DNA replication, mitosis, and cell proliferation. FoxM1 expression increases during G1 and S and reaches maximum levels in G2/M (1-3). Nuclear translocation occurs just before entry into G2/M and is associated with FoxM1 phosphorylation (4). Phosphorylation of FoxM1 by MAPK (Ser331, Ser704), Cyclin/Cdk (Ser4, Ser35, Thr600, Thr611, Thr620, Thr627, Ser638), Plk1 (Ser715, Ser724), and Chk2 (Ser376) stabilizes and activates FoxM1 (4-8). Forkhead box M1 is expressed in all embryonic tissues but is restricted to proliferating tissues in adults (9). Research studies show that FoxM1 expression is negatively regulated by p53 (10,11). Upregulation of FoxM1 is associated with many human cancers, including prostate, breast, lung, ovary, colon, pancreas, stomach, bladder, liver, and kidney, and may be associated with p53 mutations in some tumors (11,12). As a result, FoxM1 inhibitors have become a topic of interest for potential cancer therapy (13).

Background References

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4. Ma, R.Y. et al. (2005) *J Cell Sci* 118, 795-806.
5. Laoukili, J. et al. (2008) *Mol Cell Biol* 28, 3076-87.
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11. Pandit, B. et al. (2009) *Cell Cycle* 8, 3425-7.
12. Pilarsky, C. et al. (2004) *Neoplasia* 6, 744-50.
13. Gartel, A.L. (2008) *Expert Opin Ther Targets* 12, 663-5.

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 nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting **IP:** Immunoprecipitation **IHC-P:** Immunohistochemistry (Paraffin) **ChIP:** Chromatin IP

Cross-Reactivity Key

H: Human

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