#12094 Store at -20°C

HMGA1 (D4F8) Rabbit mAb

☑ 100 µl
(10 western blots)

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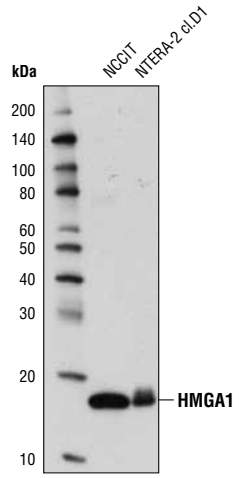
Entrez-Gene ID #3159
UniProt ID #P17096

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IHC-P, IF-IC	H, Mk, (B)	18 kDa	Rabbit IgG
Endogenous			

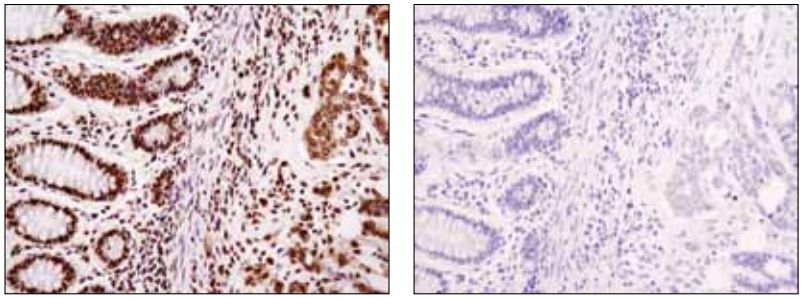
Background: HMGA1, formerly known as HMG-I/Y, belongs to a family of high mobility group proteins that contain an AT-hook DNA binding domain. HMGA proteins are considered architectural transcription factors; they do not have direct transcriptional activation capacity, but instead regulate gene expression by changing DNA conformation through binding to AT-rich regions in the DNA and/or direct interaction with other transcription factors (1,2). HMGA1 is highly expressed during embryogenesis and in embryonic stem cells, but not in fully differentiated adult tissues (2-4). Research studies have shown that HMGA1 is over-expressed in rapidly dividing neoplastic cells and a wide variety of aggressive cancers, including thyroid, colon, breast, pancreas, and prostate (2-4). Investigators have shown that forced expression of HMGA1 induces cellular transformation and an epithelial-to-mesenchymal transition (EMT), while inhibition of HMGA1 expression blocks anchorage-independent cell growth and proliferation of cancer cells, suggesting that HMGA1 contributes to carcinogenesis by inducing and maintaining a de-differentiated, highly proliferative cell state (5-8).

Specificity/Sensitivity: HMGA1 (D4F8) Rabbit mAb recognizes endogenous levels of total HMGA1 protein, isoforms 1a and 1b. Based on sequence homology, this antibody is not predicted to cross-react with HMGA2.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Gly68 of human HMGA1 protein.



Western blot analysis of extracts from NCCIT and NTERA2 cl.D1 cells using HMGA1 (D4F8) Rabbit mAb.



Immunohistochemical analysis of paraffin-embedded human colon carcinoma using HMGA1 (D4F8) Rabbit mAb in the presence of control peptide (left) or antigen-specific peptide (right).

IMPORTANT: 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.

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.*

***Species cross-reactivity is determined by western blot.**

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

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunohistochemistry (Paraffin)	1:2000†
Unmasking buffer:	Citrate
Antibody diluent:	SignalStain® Antibody Diluent #8112
Detection reagent:	SignalStain® Boost (HRP, Rabbit) #8114

†*Optimal IHC dilutions determined using SignalStain® Boost IHC Detection Reagent.*

Immunofluorescence (IF-IC)	1:200

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

Background References:

(1) Cleynen, I. and Van de Ven, W.J. (2008) *Int. J. Oncol.* 32, 289–305.

(2) Resar, L.M. (2010) *Cancer Res.* 70, 436–439.

(3) Chiappetta, G. et al. (1996) *Oncogene* 13, 2439–2446.

(4) Ben-Porath, I. et al. (2008) *Nat. Gene.t* 40, 499–507.

(5) Wood, L.J. et al. (2000) *Mol. Cell Biol.* 20, 5490–5502.

(6) Wood, L.J. et al. (2000) *Cancer Res.* 60, 4256–4261.

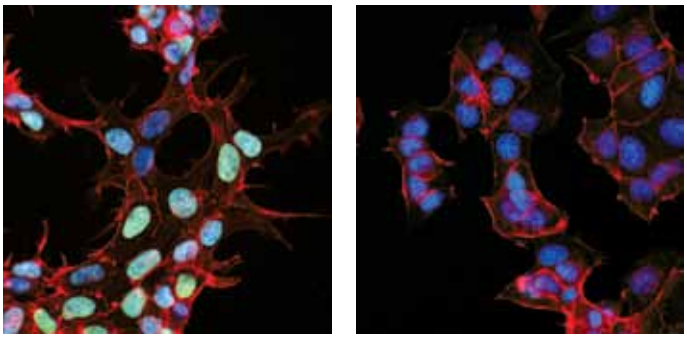
(7) Xu, Y. et al. (2004) *Cancer Res.* 64, 3371–3375.

(8) Scala, S. et al. (2000) *Proc. Natl. Acad. Sci. USA* 97, 4256–4261.

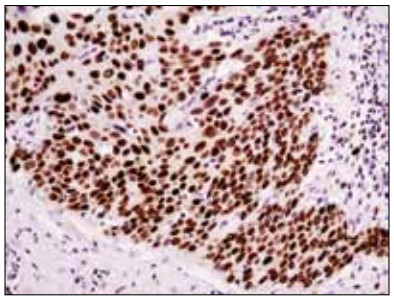
Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide

Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.

NCCIT **MCF7**



Confocal immunofluorescent analysis of NCCIT (high expression; left) and MCF7 (low expression; right) cells using HMGA1 (D4F8) Rabbit mAb (green). Actin filaments were labeled with DyLight™ 554 Phalloidin #13054 (red). Blue pseudocolor = DRAQ5® #4084 (fluorescent DNA dye).



Immunohistochemical analysis of paraffin-embedded human lung carcinoma using HMGA1 (D4F8) Rabbit mAb.