

#2769 Store at -20°C

# ASF1B Antibody

✓ 100 µl  
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

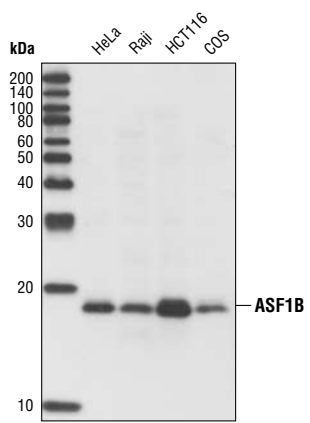
Entrez-Gene ID #55723  
Swiss-Prot Acc. #Q53G51

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W, IP Endogenous	H, Mk, (M)	19 kDa	Rabbit**

**Background:** ASF1 was first identified in *S. cerevisiae* based on its ability to de-repress transcriptional silencing when overexpressed (1). While only one gene exists in yeast and *Drosophila*, mammalian cells contain the two highly homologous ASF1A and ASF1B genes (2). ASF1A and ASF1B function as histone chaperones, delivering histone H3/H4 dimers to CAF-1 or HIRA histone deposition complexes to facilitate replication-coupled and replication-independent nucleosome assembly on DNA (2–5). Both ASF1A and ASF1B bind to CAF-1, but only ASF1A binds to HIRA (5). In addition to playing a role in DNA replication and gene silencing, ASF1 functions in DNA damage repair, genome stability and cellular senescence. Deletion of ASF1 in yeast and *Drosophila* confers sensitivity to various DNA damaging agents and inhibitors of DNA replication, increases genomic instability and sister chromatid exchange, and activates the DNA damage checkpoint (6–8). Depletion of both ASF1A and ASF1B in mammalian cells results in the accumulation of cells in S phase, increased phosphorylation of H2A, X, centrosome amplification and apoptosis (9,10). ASF1A is required for the formation of senescence-associated heterochromatin foci (SAHF), with overexpression of ASF1A inducing senescence in primary cells (4). Both ASF1A and ASF1B are phosphorylated in S phase by the Tousled-like kinases TLK1 and TLK2, and are dephosphorylated when TLK1 and TLK2 are inactivated by Chk1 kinase in response to replicativestress (11,12). The function of ASF1 phosphorylation is not yet understood.

**Specificity/Sensitivity:** ASF1B Antibody detects endogenous levels of total ASF1B protein. The antibody does not cross-react with ASF1A protein.

**Source/Purification:** Polyclonal antibodies are produced by immunizing animals with a synthetic peptide (KLH-coupled) corresponding to the carboxy terminus of the human ASF1B protein. Antibodies are purified by protein A and peptide affinity chromatography.



Western blot analysis of whole cell lysates from HeLa, Raji, HCT116 and COS cells using ASF1B Antibody.

**Background References:**

- (1) Singer, M.S. et al. (1998) *Genetics* 150, 613–632.
- (2) Mousson, F. et al. (2006) *Chromosoma* [Epub ahead of print].
- (3) Tang, Y. et al. (2006) *Nat. Struct. Mol. Biol.* 13, 921–929.
- (4) Zhang, R. et al. (2005) *Dev. Cell.* 8, 19–30.
- (5) Daganzo, S.M. et al. (2003) *Curr. Biol.* 13, 2148–2158.
- (6) Ramey, C.J. et al. (2004) *Mol. Cell. Biol.* 24, 10313–10327.
- (7) Prado, F. et al. (2004) *EMBO Rep.* 5, 497–502.
- (8) Tyler, J.K. et al. (1999) *Nature* 402, 555–560.
- (9) Sanematsu, F. et al. (2006) *J. Biol. Chem.* 281, 13817–13827.
- (10) Groth, A. et al. (2005) *Mol. Cell.* 17, 301–311.
- (11) Silljé, H.H. and Nigg, E.A. (2001) *Curr. Biol.* 11, 1068–1073.
- (12) Carrera, P. et al. (2003) *Genes Dev.* 17, 2578–2590.

**Storage:** Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. 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
Immunoprecipitation	1:25

For application specific protocols please see the web page for this product at [www.cellsignal.com](http://www.cellsignal.com).

Please visit [www.cellsignal.com](http://www.cellsignal.com) for a complete listing of recommended companion products.

**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.**

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**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 Ce—C. elegans Hr—Horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.