ACF1 Antibody

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For Research Use Only. Not For Use In Diagnostic Procedures.

Entrez-Gene ID #11177
Swiss-Prot Acc. #Q9NRL2

Applications	Species Cross-Reactivity*	Molecular Wt.	Source
W Endogenous	H, Mk	203 kDa	Rabbit

Background: The mammalian imitation SWI (ISWI) complexes are characterized by two ATPase subunits: Snf2h and Snf2l (1). Snf2h interacts with ATP-utilizing chromatin assembly and remodeling factor 1 (ACF1) to comprise the ACF chromatin-remodeling complex (1). ACF1 (BAZ1A) has distinct roles in development (2), regulation of chromatin structure (3), and DNA damage response (4,5). Different developmental stages dictate the expression of ACF1 in Drosophila, and alterations in ACF1 expression during Drosophila development leads to deviation from normal chromatin organization (2). ACF1 functions in heterochromatin formation during development and is involved in the initial establishment of diversified chromatin structures. *In vivo* studies demonstrate that heterochromatin protein 1 (HP1) binding to methylated lysine 9 of histone H3 is enhanced by the interaction of ACF1 with chromatin (6). Chromatin-remodeling factors are required during DNA damage in order to allow signaling molecules and damaging enzymes to access the site (4). Depletion of hACF1 increases apoptosis and vulnerability to radiation and compromises G2/M arrest activated in response to X-ray and UV exposure (4). Depletion of ACF1 also sensitizes cells to DNA double-stranded breaks (DSBs) and impairs DNA repair (5). Specifically, accumulation of Ku at DSBs sites may depend on the presence of ACF1 (5).

Specificity/Sensitivity: ACF1 Antibody recognizes endogenous levels of total ACF1 protein (isoforms 1 and 2).

Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Met864 of human ACF1 protein. Antibodies are purified by protein A and peptide affinity chromatography.

Background References:

(1) Saladi, S.V. and de la Serna, I.L. (2010) *Stem Cell Rev* 6, 62-73.

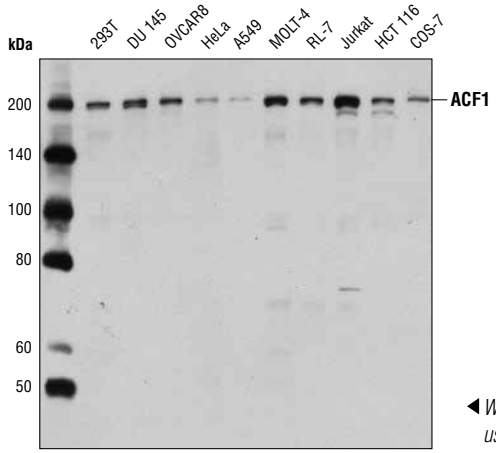
(2) Chioda, M. et al. (2010) *Development* 137, 3513-22.

(3) Ho, L. and Crabtree, G.R. (2010) *Nature* 463, 474-84.

(4) Sánchez-Molina, S. et al. (2011) *Nucleic Acids Res* 39, 8445-56.

(5) Lan, L. et al. (2010) *Mol Cell* 40, 976-87.

(6) Eskeland, R. et al. (2007) *Mol Cell Biol* 27, 453-65.



◀ *Western blot analysis of extracts from various cell lines using ACF1 Antibody.*

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 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

For application 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.

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.