

Afadin (D1Y3Z) Rabbit mAb



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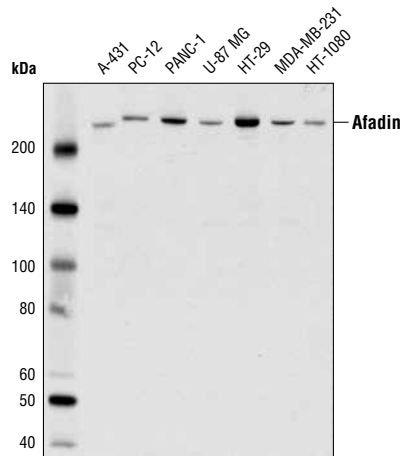
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Applications W, IP Endogenous	Species Cross-Reactivity* H, M, R, Mk, Dg	Molecular Wt. 205 kDa	Isotype Rabbit IgG**
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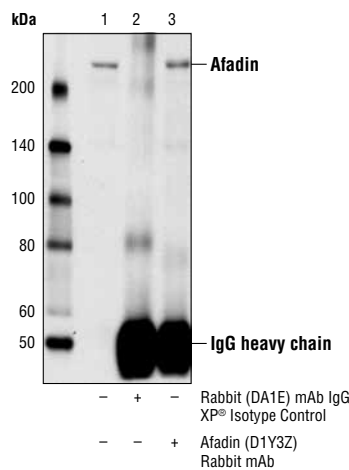
Background: In multicellular organisms, intercellular junctions play essential roles in tissue integrity and maintenance of cell polarity. Tight junctions (TJs) form a continuous barrier to fluids across the epithelium and endothelium (reviewed in 1). Adherens junctions (AJs) are dynamic structures that form cell-cell contacts linking cells into a continuous sheet (reviewed in 2). The actin filament-binding protein, Afadin, binds to nectin forming a connection to the actin cytoskeleton (3). AJs are formed when nectin assembles cadherin at the cell-cell adhesion site and these junctions are then involved in the formation and maintenance of TJs (4,5). Afadin has two splice variants: l-afadin, which is ubiquitously expressed, and s-afadin, which is expressed predominantly in neural tissue. s-Afadin is a shorter form lacking one of the three proline-rich regions found in l-afadin, as well as the carboxyl-terminal F-actin binding region (6). Human s-afadin is identical to AF-6, the ALL-1 fusion partner involved in acute myeloid leukemias (7). Recent work has also shown that afadin is involved in controlling the directionality of cell movement when it is localized at the leading edge of moving cells (8,9).

Specificity/Sensitivity: Afadin (D1Y3Z) Rabbit mAb recognizes endogenous levels of total afadin protein. Based on the the protein sequence, this antibody is expected to recognize all afadin isoforms.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Arg1117 of human afadin protein.



Western blot analysis of extracts from various cell lines using Afadin (D1Y3Z) Rabbit mAb.



Immunoprecipitation of afadin from A-431 cell extracts using Rabbit (DA1E) mAb IgG XP® Isotype Control #3900 (lane 2) or Afadin (D1Y3Z) Rabbit mAb (lane 3). Lane 1 is 10% input. Western blot was performed using Afadin (D1Y3Z) Rabbit mAb.

Entrez Gene ID #4301
 UniProt ID #P55196

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
Immunoprecipitation	1:50

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) Shin, K. et al. (2006) *Annu Rev Cell Dev Biol* 22, 207-35.
- (2) Harris, T.J. and Tepass, U. (2010) *Nat Rev Mol Cell Biol* 11, 502-14.
- (3) Ikeda, W. et al. (1999) *J Cell Biol* 146, 1117-32.
- (4) Sato, T. et al. (2006) *J Biol Chem* 281, 5288-99.
- (5) Ooshio, T. et al. (2007) *J Cell Sci* 120, 2352-65.
- (6) Mandai, K. et al. (1997) *J Cell Biol* 139, 517-28.
- (7) Prasad, R. et al. (1993) *Cancer Res* 53, 5624-8.
- (8) Miyata, M. et al. (2009) *J Cell Sci* 122, 4319-29.
- (9) Miyata, M. et al. (2009) *J Biol Chem* 284, 24595-609.

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.