Revision 1

Store at -20C

#5485

Phospho-Afadin (Ser1718) Antibody

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
W	H	Endogenous	205	Rabbit	#P55196	4301

Product Usage Information

Application	Dilution
Western Blotting	1:1000

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.

Specificity/Sensitivity

Phospho-Afadin (Ser1718) Antibody detects endogenous levels of l-afadin protein only when phosphorylated at serine 1718.

Species predicted to react based on 100% sequence homology

Mouse, Rat, Monkey, Dog

Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic phosphopeptide corresponding to residues surrounding Ser1718 of human afadin. Antibodies are purified using protein A and peptide affinity chromatography.

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). Phospho-Afadin (Ser1718) Antibody is directed at a site that was identified at Cell Signaling Technology (CST) using PhosphoScan®, CST's LC-MS/MS platform for modification site discovery. Phosphorylation at Ser1718 was discovered using an Akt substrate antibody. Please visit PhosphoSitePlus®, CST's modification site knowledgebase, at www.phosphosite.org for more information.

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.

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

Applications Key

W: Western Blotting

Cross-Reactivity Key

H: Human

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