

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human Afadin/AF-6 in direct ELISAs.                                                                                                                                                                                                                                 |
| <b>Source</b>             | Monoclonal Mouse IgG <sub>1</sub> Clone # 851204                                                                                                                                                                                                                            |
| <b>Purification</b>       | Protein A or G purified from hybridoma culture supernatant                                                                                                                                                                                                                  |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human Afadin/AF-6<br>Asn217-Pro392<br>Accession # P55196                                                                                                                                                                                |
| <b>Conjugate</b>          | Alexa Fluor 532<br>Excitation Wavelength: 534 nm<br>Emission Wavelength: 553 nm                                                                                                                                                                                             |
| <b>Formulation</b>        | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide<br><br>*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

|                            |                                                                        |
|----------------------------|------------------------------------------------------------------------|
| <b>Western Blot</b>        | Optimal dilution of this antibody should be experimentally determined. |
| <b>Immunocytochemistry</b> | Optimal dilution of this antibody should be experimentally determined. |

## PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

## BACKGROUND

Afadin, also known as MLLT-4 (Myeloid/Lymphoid or mixed-lineage Leukemia Translocated to Ch 4) and AF-6, is a 200-210 kDa nectin and F-actin-binding intracellular protein. It is ubiquitously expressed, and serves as an intermediary that links nectin with the actin cytoskeleton in tight and adherens junctions (AJs). Afadin is involved in the nectin-mediated recruitment of catenins to zonule adherens complexes, and in the recruitment of ZO-1 to the apical side of AJs for the purpose of forming tight junctions. Human Afadin is 1824 amino acids (aa) in length. The protein contains two Ras-association (RA) domains (aa 20-348), a phosphoprotein FHA domain (aa 426-492), a Vav2 Ras-activating "dilute" domain (aa 668-908), one PDZ domain that binds protein C-termini (aa 1007-1093), and three proline-rich regions (aa 1346-1708). There are at least fourteen utilized Ser/Thr phosphorylation sites and two Tyr phosphorylation sites. There are at least seven alternative splice variants are reported for Afadin. There is a 190 kDa isoform that shows a 12 aa insert after Arg1605 coupled to a four aa substitution for aa 1650-1824. Other isoforms contain scattered deletions of one to three aa coupled to major aa changes. Five isoforms share a deletion of aa 393-407, with four of these containing a 24 aa substitution for aa 1605-1824, a 73 aa substitution for aa 1747-1824, an 11 aa substitution for aa 680-1824, and a deletion of aa 1683-1746, respectively. A final isoform possesses a four aa substitution for aa 1650-1824. Over aa 217-392, human Afadin shares 94% aa sequence identity with mouse Afadin.

## PRODUCT SPECIFIC NOTICES

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