

#### DESCRIPTION

|                                                                                                                                                                                                         |                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human/Mouse/Rat                                                                         |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human EEA1 in direct ELISAs and human, mouse, and rat EEA1 in Western blots.    |
| <b>Source</b>                                                                                                                                                                                           | Monoclonal Mouse IgG <sub>1</sub> Clone # 871546                                        |
| <b>Purification</b>                                                                                                                                                                                     | Protein A or G purified from hybridoma culture supernatant                              |
| <b>Immunogen</b>                                                                                                                                                                                        | <i>E. coli</i> -derived recombinant human EEA1<br>Asn1249-Gln1356<br>Accession # Q15075 |
| <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                            |
| *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

EEA1 (Early Endosome Autoantigen 1; also known as Endosome-associated protein p162 and Zn-finger FYVE domain-containing protein 2) is a 170-180 kDa protein that serves as an identifying marker for early endosomes. It is ubiquitously expressed, and found in both the cytosol and on cellular membranes. Its activity has been described as that of a tethering factor which links endosomes to endocytic vesicles, allowing for their fusion via a SNARE complex. Normally, EEA1 exists as a homodimer in the cytoplasm and appears to make transient contacts with endosome membrane phosphatidylinositol. When endosome fusion is not required, EEA1 serves as a substrate for p97, promoting EEA1 dissociation and endosome independence. When endosome fusion is required, EEA1 interacts with NSF, resulting in its removal from a large endosome-associated complex and subsequent endosomal vesicle fusion. Human EEA1 is synthesized as a 1411 amino acid (aa) protein that contains one C2H2-type Zn finger region (aa 41-64) and one FYVE Zn finger domain (aa 1352-1410). There is one isoform variant that contains a nine aa substitution for aa 925-1411. Over aa 1249-1356, human EEA1 shares 99% and 100% aa sequence identity with mouse and rat EEA1, respectively.

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