

#### DESCRIPTION

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|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human/Mouse/Rat                                                                                                                                                                                                                                                             |
| <b>Specificity</b>        | Detects human, mouse, and rat Endophilin A1/SH3GL2 in Western blots.                                                                                                                                                                                                        |
| <b>Source</b>             | Polyclonal Sheep IgG                                                                                                                                                                                                                                                        |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | <i>E. coli</i> -derived recombinant human Endophilin A1/SH3GL2<br>Ala217-Pro293<br>Accession # Q99962                                                                                                                                                                       |
| <b>Conjugate</b>          | Alexa Fluor 594<br>Excitation Wavelength: 590 nm<br>Emission Wavelength: 617 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.

**Western Blot** 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

Endophilin A1 (also SH3GL2, SH3P4, EEN-B1, CNS-A2, GL2 and SH3D2A) is a 39-42 kDa member of the A subfamily, endophilin (attracted to endocytic protein) family of molecules. It is a neuronally-expressed cytosolic protein that is concentrated in presynaptic areas. Endophilin A1 is a key player in clathrin-associated endocytosis, participating in invagination plus vesicle fission and recycling. It is able to impact membrane curvature through electrostatic differences via its N-terminus, and interact with multiple synaptic region proteins such as dynamin and synaptojanin through an SH3 homology domain at its C-terminus. Although Endophilin A1 is a monomer in the cytosol, it will homodimerize and heterodimerize with endophilin-2 when active at the synapse. Endophilin A1 is also associated with endocytic trafficking of growth factor receptors. In concert with CIN85, Cbl and ataxin-2, Endophilin A1 extend the half-life of EGFR at the plasma membrane. Human Endophilin A1 is 352 amino acids (aa) in length. It contains an aforementioned N-terminal BAR domain (aa 18-249) plus an SH3 domain that binds Pro-rich aa sequences (aa 290-349). There is one potential alternative start site at Met36. Endophilin A1 is one of three groupA endophilin isoforms, all of which are the product of separate genes. Although the -A2 and -A3 isoforms share approximately 70% aa overall sequence identity with -A1, over aa 217-293, -A2 and -A3 share less than 50% aa sequence identity with Endophilin A1. Over this same aa sequence, human and mouse Endophilin A1 share more than 97% aa sequence identity.

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