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# Epsin 1 Rabbit pAb

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Catalog # AP55059

## Product Information

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| **Application** | IHC-P, IHC-F, IF |
| **Primary Accession** | Q9Y6I3 |
| **Reactivity** | Human, Rat |
| **Predicted** | Mouse, Dog, Horse, Sheep |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 60293 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human Epsin 1/EPN1 |
| **Epitope Specificity** | 101-200/576 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **SUBCELLULAR LOCATION** | Cytoplasm (By similarity). Cell membrane; Peripheral membrane protein (By similarity). Nucleus (By similarity). Membrane, clathrin-coated pit (By similarity). Note=Associated with the cytoplasmic membrane at sites where clathrin-coated pits are forming. Colocalizes with clathrin and AP-2 in a punctate pattern on the plasma membrane. Detected in presynaptic nerve terminals and in Golgi stacks. May shuttle to the nucleus when associated with ZBTB16/ZNF145 (By similarity). |
| **SIMILARITY** | Belongs to the epsin family. Contains 1 ENTH (epsin N-terminal homology) domain. Contains 3 UIM (ubiquitin-interacting motif) repeats. |
| **SUBUNIT** | Monomer. Binds clathrin, ZBTB16/ZNF145 and ITSN1. Binds ubiquitinated proteins (By similarity). Binds REPS2, EPS15, AP2A1 and AP2A2. Interacts with RALBP1 in a complex also containing NUMB and TFAP2A during interphase and mitosis. Interacts with AP2B1. [SUBCELLULAR LOCATION] |
| **Post-translational modifications** | Phosphorylated on serine and/or threonine residues in mitotic cells. Phosphorylation reduces interaction with REPS2, AP-2 and the membrane fraction. Depolarization of synaptosomes results in dephosphorylation. Ubiquitinated (By similarity). |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | Epsin 1 is an endocytic accessory protein, with significant similarity to the Xenopus mitotic phosphoprotein MP90. Epsin 1 interacts with Eps15 (the ?subunit of the Clathrin adaptor AP2), Clathrin and other accessory proteins. The mitotic phosphorylation of these proteins may be one of the mechanisms by which the invagination of Clathrin-coated pits is blocked in mitosis. Both Epsin and Eps15, like other cytosolic components of the synaptic vesicle endo-cytic machinery, undergo constitutive phosphorylation and depolarization-dependent dephosphorylation in nerve terminals. Epsin 1 also contributes to the mechanism of Clathrin-vesicle-dependent endocytosis. The human Epsin 1 protein contains an Epsin N-terminal homology (ENTH) region and a single Clathrin-binding (LVDLD) motif. Epsin 1 localizes to the leading |

edge of a vesicular coated pit where the membrane is being actively bent.

## Additional Information

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| **Gene ID** | 29924 |
| **Other Names** | Epsin-1, EH domain-binding mitotic phosphoprotein, EPS-15-interacting protein 1, EPN1 |
| **Dilution** | IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500 |
| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| **Name** | EPN1 |
| **Function** | Binds to membranes enriched in phosphatidylinositol 4,5- bisphosphate (PtdIns(4,5)P2). Modifies membrane curvature and facilitates the formation of clathrin-coated invaginations (By similarity). Regulates receptor-mediated endocytosis (PubMed:10393179, PubMed:10557078). |
| **Cellular Location** | Cytoplasm. Cell membrane; Peripheral membrane protein. Nucleus. Membrane, clathrin-coated pit Note=Associated with the cytoplasmic membrane at sites where clathrin- coated pits are forming. Colocalizes with clathrin and AP-2 in a punctate pattern on the plasma membrane. Detected in presynaptic nerve terminals and in Golgi stacks. May shuttle to the nucleus when associated with ZBTB16/ZNF145 (By similarity). |

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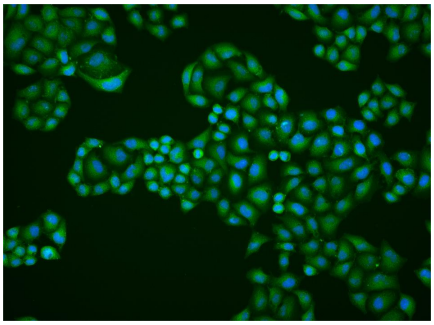
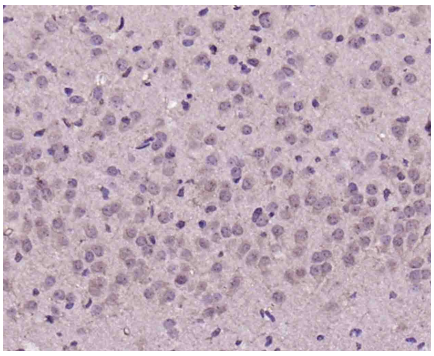
## Images

Hela cell; 4% Paraformaldehyde-fixed; Triton X-100 at room temperature for 20 min; Blocking buffer (normal goat serum, C-0005) at 37°C for 20 min; Antibody incubation with (Epsin 1) polyclonal Antibody, Unconjugated (AP55059) 1:50, 90 minutes at 37°C; followed by a conjugated Goat Anti-Rabbit IgG antibody at 37°C for 90 minutes, DAPI (blue, C02-04002) was used to stain the cell nuclei.





Paraformaldehyde-fixed, paraffin embedded (rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Incubation with (Epsin 1 Rabbit pAb) Polyclonal Antibody, Unconjugated (AP55059) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.