

KD-Validated Anti-Dynamin 1 Rabbit Monoclonal Antibody
Rabbit monoclonal antibody
Catalog # AGI1032**Specification****KD-Validated Anti-Dynamin 1 Rabbit Monoclonal Antibody - Product Information**

Application	WB, ICC
Primary Accession	Q05193
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Isotype	Rabbit IgG
Calculated MW	Predicted, 97 kDa, observed, 97 kDa kDa
Gene Name	DNM1
Aliases	DNM1; Dynamin 1; DNM; EC 3.6.5.5; Dynamin-1; DEE31A; DEE31B; EIEE31; DEE31
Immunogen	A synthesized peptide derived from human Dynamin 1

KD-Validated Anti-Dynamin 1 Rabbit Monoclonal Antibody - Additional Information

Gene ID	1759
Other Names	
Dynamin-1, 3.6.5.5, Dynamin, Dynamin I, DNM1 (HGNC:2972), DNM	

KD-Validated Anti-Dynamin 1 Rabbit Monoclonal Antibody - Protein InformationName DNM1 ([HGNC:2972](#))

Synonyms DNM

Function

Catalyzes the hydrolysis of GTP and utilizes this energy to mediate vesicle scission and participates in many forms of endocytosis, such as clathrin-mediated endocytosis or synaptic vesicle endocytosis as well as rapid endocytosis (RE) (PubMed:[15703209](http://www.uniprot.org/citations/15703209), PubMed:[20428113](http://www.uniprot.org/citations/20428113), PubMed:[29668686](http://www.uniprot.org/citations/29668686), PubMed:[8101525](http://www.uniprot.org/citations/8101525), PubMed:[8910402](http://www.uniprot.org/citations/8910402), PubMed:[9362482](http://www.uniprot.org/citations/9362482)). Associates to the membrane, through lipid binding, and self-assembles into rings and stacks of interconnected rings through oligomerization to form a helical polymer around the vesicle membrane leading to constriction of invaginated coated pits around their necks (PubMed:[30069048](http://www.uniprot.org/citations/30069048), PubMed:[7877694](http://www.uniprot.org/citations/7877694), PubMed:[7877694](http://www.uniprot.org/citations/7877694)).

[9922133](http://www.uniprot.org/citations/9922133). Self-assembly of the helical polymer induces membrane tubules narrowing until the polymer reaches a length sufficient to trigger GTP hydrolysis (PubMed: [19084269](http://www.uniprot.org/citations/19084269)). Depending on the curvature imposed on the tubules, membrane detachment from the helical polymer upon GTP hydrolysis can cause spontaneous hemifission followed by complete fission (PubMed: [19084269](http://www.uniprot.org/citations/19084269)). May play a role in regulating early stages of clathrin-mediated endocytosis in non-neuronal cells through its activation by dephosphorylation via the signaling downstream of EGFR (PubMed: [29668686](http://www.uniprot.org/citations/29668686)). Controls vesicle size at a step before fission, during formation of membrane pits, at hippocampal synapses (By similarity). Controls plastic adaptation of the synaptic vesicle recycling machinery to high levels of activity (By similarity). Mediates rapid endocytosis (RE), a Ca(2+)-dependent and clathrin- and K(+)-independent process in chromaffin cells (By similarity). Microtubule-associated force-producing protein involved in producing microtubule bundles and able to bind and hydrolyze GTP (By similarity). Through its interaction with DNAJC6, acts during the early steps of clathrin-coated vesicle (CCV) formation (PubMed: [12791276](http://www.uniprot.org/citations/12791276)).

Cellular Location

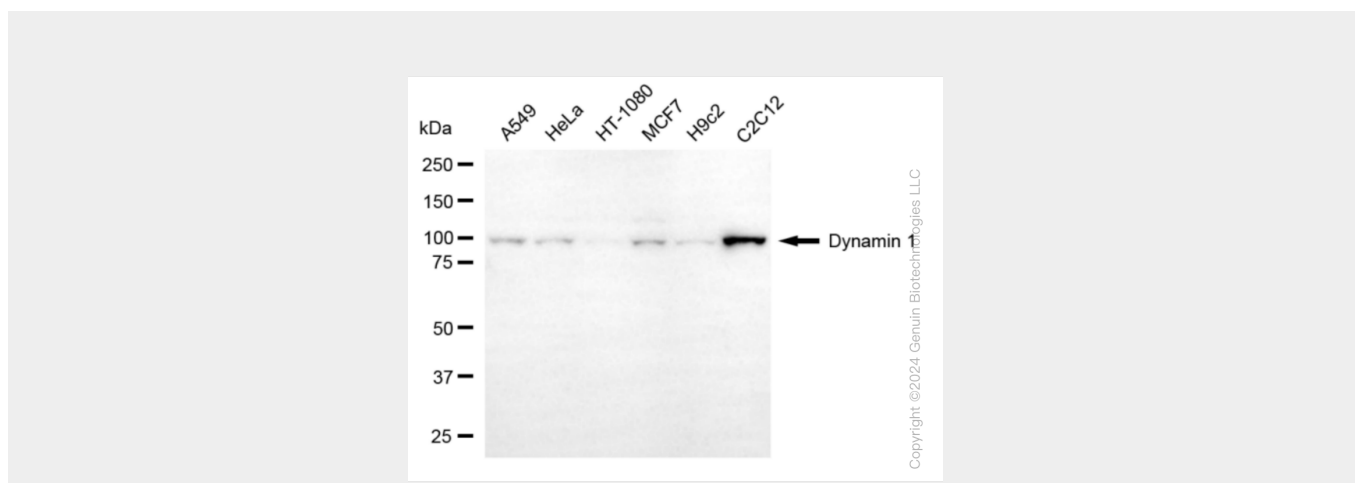
Cell membrane. Membrane, clathrin-coated pit. Cytoplasmic vesicle {ECO:0000250|UniProtKB:P21575, ECO:0000250|UniProtKB:P39053} Presynapse {ECO:0000250|UniProtKB:P21575}. Cytoplasmic vesicle, secretory vesicle, chromaffin granule {ECO:0000250|UniProtKB:Q08DF4} Note=Associated to the membrane in a helical polymer shape in a GTP bound state (PubMed:30069048). Transiently recruited to endocytic clathrin-coated pits (CCPs) at a late stage of clathrin-coated vesicle (CCV) formation (PubMed:15703209).

KD-Validated Anti-Dynamin 1 Rabbit Monoclonal Antibody - Protocols

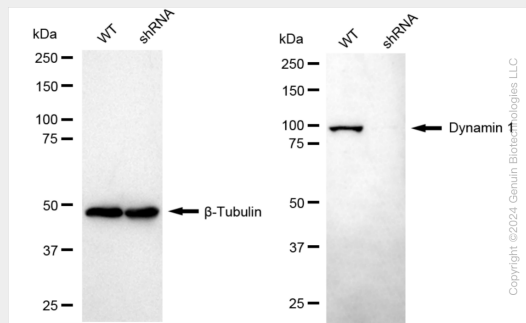
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

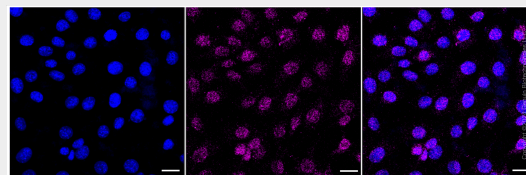
KD-Validated Anti-Dynamin 1 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-dynamin 1 antibody (Cat#AGI1032). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-dynamin 1 antibody (Cat#AGI1032, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-dynamin 1 antibody (Cat#AGI1032). Dynamin 1 expression in wild type (WT) and dynamin 1 (DNM1) shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-dynamin 1 antibody (Cat#AGI1032, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Immunocytochemical staining of C2C12 cells with anti-dynamin 1 antibody (Cat#AGI1032, 1:1000). Nuclei were stained blue with DAPI; Dynamin 1 was stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: Medium. Scale bar, 20 µm.