10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KATNA1 Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP59215

Specification

KATNA1 Polyclonal Antibody - Product Information

Application	**WB, IHC-P, IHC-F, IF, E**
Primary Accession	O75449
Reactivity	**Rat, Pig, Dog, Bovine**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**56 KDa**
Physical State	**Liquid**
Immunogen	**KLH conjugated synthetic peptide derived from human KATNA1/Katanin p60 A1**
Epitope Specificity	**221-320/491**
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. Cytoplasm, cytoskeleton, centrosome. Cytoplasm, cytoskeleton, spindle pole. Cytoplasm, cytoskeleton. Note=Predominantly cytoplasmic. Also localized to the interphase centrosome and the mitotic spindle poles. Enhanced recruitment to the mitotic spindle poles requires microtubules and interaction with KATNB1.**
SIMILARITY	**Belongs to the AAA ATPase family. Katanin p60 subunit A1 subfamily.**
SUBUNIT	**Can homooligomerize into hexameric rings, which may be promoted by interaction with microtubules. Interacts with KATNB1, which may serve as a targeting subunit. Interacts with dynein and NDEL1. Associates with the E3 ligase complex containing DYRK2, EDD/UBR5, DDB1 and VPRBP proteins (EDVP complex).**
Post-translational modifications	**Ubiquitinated by the EDVP E3 ligase complex and subsequently targeted to proteasomal degradation.**
Important Note	**This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.**

Background Descriptions
Microtubules are polymers of alpha and beta subunits that form the mitotic spindle and assist in the organization of membranous organelles during interphase. Katanin p60 A1, also known as KATNA1, is a 491 amino acid protein that belongs to the AAA ATPase family and is involved in

microtubule regulation. Localized to the cytoplasm and to the centrosome, Katanin p60 A1 functions to sever and disassemble microtubules in an ATP-dependent manner, thus promoting the rapid reorganization of cellular microtubule arrays and playing an important role in microtubule release from the centrosome after nucleation. Katanin p60 A1, which exists as two alternatively spliced isoforms, can homooligomerize into hexameric rings whose activity is stimulated by the presence of microtubules.

KATNA1 Polyclonal Antibody - Additional Information

Gene ID 11104

Other Names
Katanin p60 ATPase-containing subunit A1 {ECO:0000255|HAMAP-Rule:MF_03023}, Katanin p60 subunit A1 {ECO:0000255|HAMAP-Rule:MF_03023}, 5.6.1.1 {ECO:0000255|HAMAP-Rule:MF_03023}, p60 katanin {ECO:0000255|HAMAP-Rule:MF_03023}, KATNA1 {ECO:0000255|HAMAP-Rule:MF_03023}

Dilution
WB~~1:1000<br \>IHC-P~~N/A<br \>IHC-F~~N/A<br \>IF~~1:50~200<br \>E~~N/A

Storage
Store at -20 ℃ 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 ℃.

KATNA1 Polyclonal Antibody - Protein Information

Name KATNA1 {ECO:0000255|HAMAP-Rule:MF_03023}

Function
Catalytic subunit of a complex which severs microtubules in an ATP-dependent manner. Microtubule severing may promote rapid reorganization of cellular microtubule arrays and the release of microtubules from the centrosome following nucleation. Microtubule release from the mitotic spindle poles may allow depolymerization of the microtubule end proximal to the spindle pole, leading to poleward microtubule flux and poleward motion of chromosome. Microtubule release within the cell body of neurons may be required for their transport into neuronal processes by microtubule-dependent motor proteins. This transport is required for axonal growth.

Cellular Location
Cytoplasm. Midbody. Cytoplasm, cytoskeleton, microtubule organizing center, centrosome {ECO:0000255|HAMAP-Rule:MF_03023} Cytoplasm, cytoskeleton, spindle pole. Cytoplasm, cytoskeleton, spindle. Note=Predominantly cytoplasmic (PubMed:9658175). Localized diffusely in the cytoplasm during the interphase (PubMed:10751153). During metaphase is localized throughout the cell and more widely dispersed than the microtubules. In anaphase and telophase is localized at the midbody region (PubMed:19261606). Also localized to the interphase centrosome and the mitotic spindle poles (By similarity). Enhanced recruitment to the mitotic spindle poles requires microtubules and interaction with KATNB1 (PubMed:10751153). Localizes within the cytoplasm, partially overlapping with microtubules, in interphase and to the mitotic spindle and spindle poles during mitosis (PubMed:26929214). {ECO:0000255|HAMAP-Rule:MF_03023, ECO:0000269|PubMed:10751153, ECO:0000269|PubMed:19261606, ECO:0000269|PubMed:26929214, ECO:0000269|PubMed:9658175}

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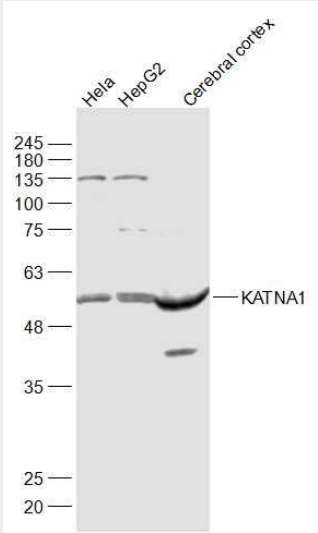
KATNA1 Polyclonal Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KATNA1 Polyclonal Antibody - Images



Sample:
Hela(Human) Cell Lysate at 30 ug
HepG2(Human) Cell Lysate at 30 ug
Cerebral cortex (Mouse) Lysate at 40 ug
Primary: Anti-KATNA1 (bs-9308R) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size:56 kD
Observed band size: 56 kD

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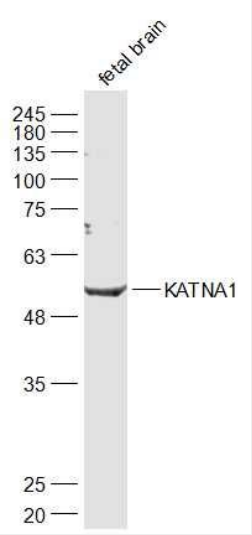
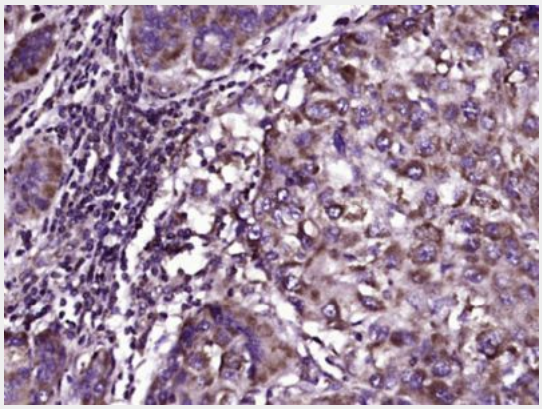
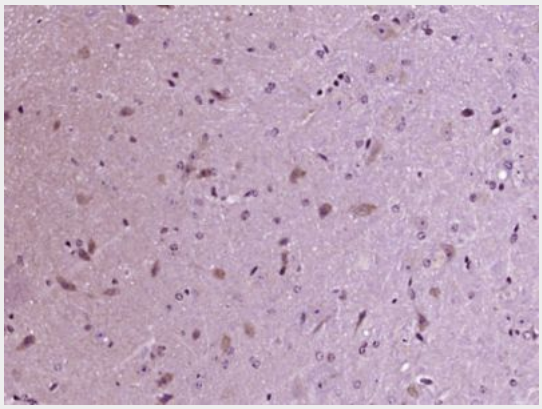


Sample:
Fetal brain (Mouse) Lysate at 40 ug
Primary: Anti-KATNA1 (bs-9308R) at 1/1000 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size:56 kD
Observed band size: 56 kD



Paraformaldehyde-fixed, paraffin embedded (Human liver carcinoma); 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; Antibody incubation with (KATNA1) Polyclonal Antibody, Unconjugated (bs-9308R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.



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Paraformaldehyde-fixed, paraffin embedded (Mouse 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; Antibody incubation with (KATNA1) Polyclonal Antibody, Unconjugated (bs-9308R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.