SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Mouse Anti-MAP2 antibody

SLM-33073M

Product Name	MAP2
Chinese Name	微管相关蛋白 2 单克隆抗体
Alias	Microtubule-associated protein 2; DKFZp686I2148; Dendrite specific MAP; DKFZp686I2148; MAP 2; MAP-2; MAP2A; MAP2B; MAP2C; Microtubule associated protein 2; Mtap 2; MAP2_HUMAN.
Research Area	Tumour Cell biology Neurobiology Apoptosis Cell type markers Cytoskeleton
Immunogen Species	Mouse
Clonality	Monoclonal
Clone NO.	9E5
React Species	Human
Applications	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	201kDa
Cellular localization	cytoplasmic
Form	Liquid
Concentration	1mg/ml
immunogen	Recombinant human MAP2 protein
Lsotype	IgG1
Purification	affinity purified by Protein G
Buffer Solution	Human1M TBS(pH7.4) with 1% BSA, Human3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PubMed PubMed

MAP2 is the major microtubule associated protein of brain tissue. There are three forms of MAP2; two are similarily sized with apparent molecular weights of 280 kDa (MAP2a and MAP2b) and the third with a lower molecular weight of 70 kDa (MAP2c). In the newborn rat brain, MAP2b and MAP2c are present, while MAP2a is absent. Between postnatal days 10 and 20, MAP2a appears. At the same time, the level of MAP2c drops by 10-fold. This change happens during the period when dendrite growth is completed and when neurons have reached their mature morphology. MAP2 is degraded by a Cathepsin D-like protease in the brain of aged rats. There is some indication that MAP2 is expressed at higher levels in some types of neurons than in other types. MAP2 is known to promote microtubule assembly and to form side-arms on microtubules. It also interacts with neurofilaments, actin, and other elements of the cytoskeleton.

Function:
The exact function of MAP2 is unknown but MAPs may stabilize the microtubules against depolymerization. They also seem to have a stiffening effect on microtubules.

Subcellular Location:
Cytoplasm, cytoskeleton (Probable).

Product Detail

Post-translational modifications:
Phosphorylated at serine residues in K-X-G-S motifs by MAP/microtubule affinity-regulating kinase (MARK1 or MARK2), causing detachment from microtubules, and their disassembly. MAP2A/c is phosphorylated. Phosphorylated upon DNA damage, probably by ATM or ATR. Isoform MAP2c is phosphorylated by FYN at Tyr-67.

Similarity:
Contains 3 Tau/MAP repeats.

SWISS:
P11137

Gene ID:
4133

Database links:

Entrez Gene: 4133 Human

Entrez Gene: 25595 Rat

Omim: 157130 Human

SwissProt: P11137 Human

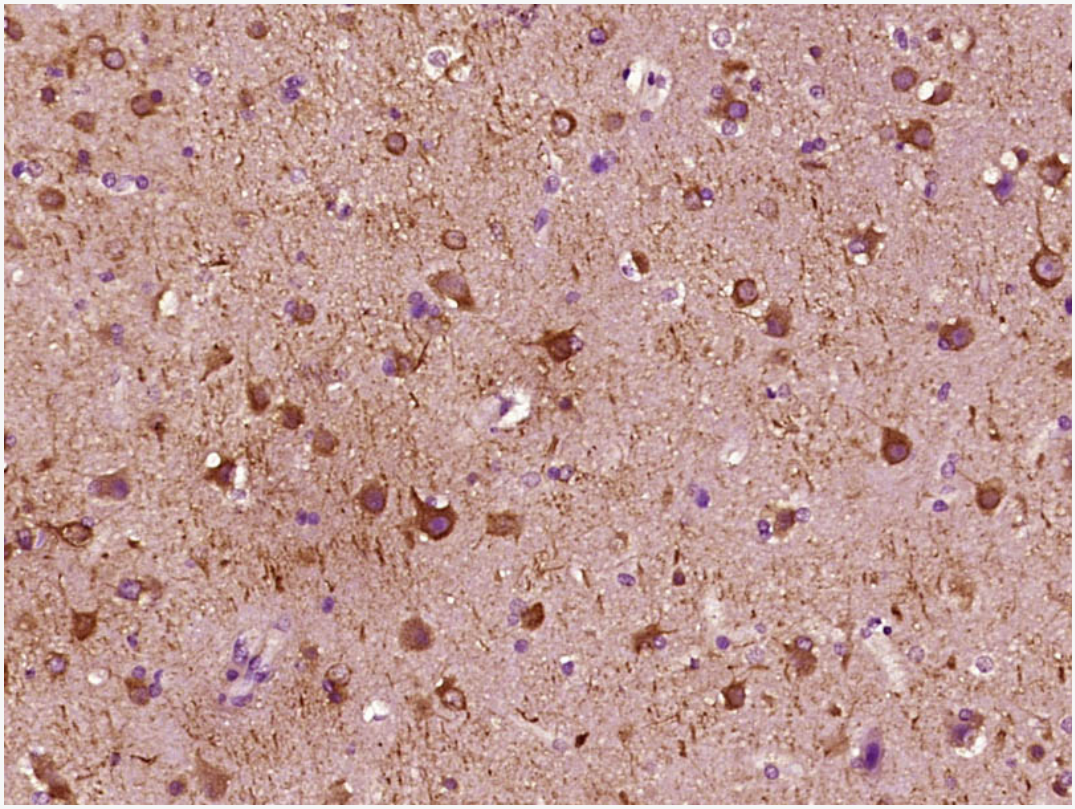
SwissProt: P20357 Mouse

SwissProt: P15146 Rat

Unigene: 368281 Human

Unigene: 256966 Mouse

Product Picture



Paraformaldehyde-fixed, paraffin embedded (Human brain glioma); 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 (MAP2) Monoclonal Antibody, Unconjugated (SLM-33073M) at 1:400 overnight at 4°C, followed by

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operating according to SP Kit(Mouse) (sp-0024) instructionsand DAB staining.