



Rabbit Anti-GAP43 antibody

SL0154R

Product Name:	GAP43
Chinese Name:	神经生长相关蛋白43抗体
Alias:	Growth Associated Protein-43; Neuromodulin; Axonal membrane protein GAP 43; B-50; F1; GAP 43; Growth Associated Protein 43; Nerve Growth Related Peptide; Neural phosphoprotein B 50; Neuromodulin; GAP-43; pp46; NEUM_HUMAN; Protein F1; QtrA-11580; QtrA-13071.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Chicken,Dog,
Applications:	WB=1:500-2000ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=1µg/TestIF=1:200-800 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	25/46kDa
Cellular localization:	cytoplasmicThe cell membraneExtracellular matrix
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human GAP43:9-100/238
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. 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.
PubMed:	PubMed
Product Detail:	The protein encoded by this gene has been termed a 'growth' or 'plasticity' protein because it is expressed at high levels in neuronal growth cones during development and axonal regeneration. This protein is considered a crucial component of an effective regenerative response in the nervous system. Alternatively spliced transcript variants

encoding distinct isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

Function:

This protein is associated with nerve growth. It is a major component of the motile 'growth cones' that form the tips of elongating axons. Plays a role in axonal and dendritic filopodia induction.

Subunit:

Identified in a complex containing FGFR4, NCAM1, CDH2, PLCG1, FRS2, SRC, SHC1, GAP43 and CTTN. Binds calmodulin with a greater affinity in the absence of Ca(2+) than in its presence.

Subcellular Location:

Cell membrane; Peripheral membrane protein; Cytoplasmic side. Cell projection, growth cone membrane; Peripheral membrane protein; Cytoplasmic side. Cell junction, synapse. Cell projection, filopodium membrane; Peripheral membrane protein. Note=Cytoplasmic surface of growth cone and synaptic plasma membranes.

Post-translational modifications:

Phosphorylated at Ser-41 by PHK. Phosphorylation of this protein by a protein kinase C is specifically correlated with certain forms of synaptic plasticity.

Palmitoylation by ARF6 is essential for plasma membrane association and axonal and dendritic filopodia induction. Deacylated by LYPLA2.

Similarity:

Belongs to the neuromodulin family.
Contains 1 IQ domain.

SWISS:

P06837

Gene ID:

2596

Database links:

[Entrez Gene: 2596](#)Human

[Entrez Gene: 14432](#)Mouse

[Entrez Gene: 29423](#)Rat

[GenBank: NP_002036](#)Human

[Omim: 162060](#)Human

[SwissProt: P17677](#)Human

[SwissProt: P06837](#)Mouse

[SwissProt: P07936](#)Rat

[Unigene: 134974](#)Human

[Unigene: 1222](#)Mouse

[Unigene: 10928](#)Rat

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Neurobiology相关蛋白 (Neurobiology) ; 神经Maker

GAP43 (Growth associated protein-

43) 又称作neuromodulin, 是一个轴突膜蛋白, 是一种神经特异性的蛋白质, 参与神经细胞外生长及突触发育形成和神经细胞再生。在神经元发育和再生过程中以高水平表达。能调解轴突延伸作用, 改变细胞形态。作为细胞内信号, 可大大增强与G蛋白偶联的受体转运作用。

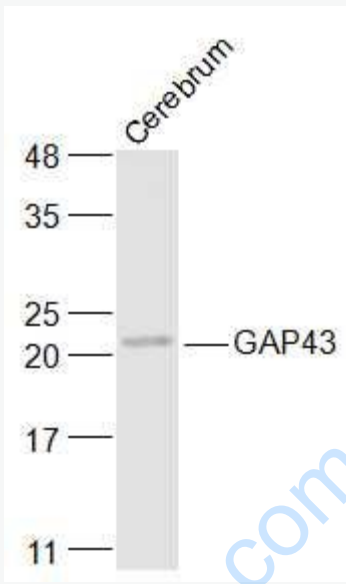
神经生长相关蛋白-GAP-43和神经细胞黏附因子(neural cell adhesion molecule,NCAM)与突触可塑性密切相关.GAP-43是一种神经

The cell membrane上的特异性磷蛋白,在神经发育和再生过程中呈现高表达,被作为突触生长的Maker,有称脊髓生长相关蛋白

GAP-

43与CaM结合,参与G蛋白相互作用,神经递质的释放,作用于胞吞/胞吐过程,通过小囊溶合或诱导生长锥和突触前末端的胞吞促进膜扩展,与海马长时程增强密切相关.神经细胞黏附因子是细胞表面glycoprotein大家族的成员之一,促进轴突生长,对长时记忆的保持有重要影响,同时,GAP-43对其具调节作用,广泛而深入地研究GAP-43意义深远。

Picture:



Sample:

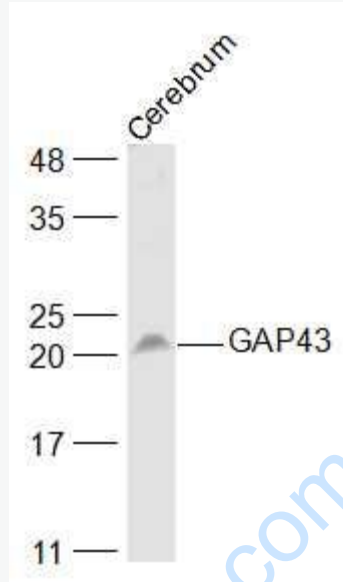
Cerebrum (Rat) Lysate at 40 ug

Primary: Anti-GAP43 (SL0154R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 25/46 kD

Observed band size: 22 kD



Sample:

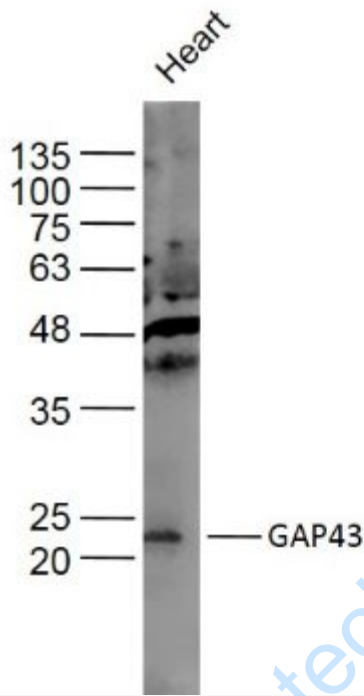
Cerebrum (Mouse) Lysate at 40 ug

Primary: Anti-GAP43 (SL0154R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 25/46 kD

Observed band size: 22 kD



Sample:

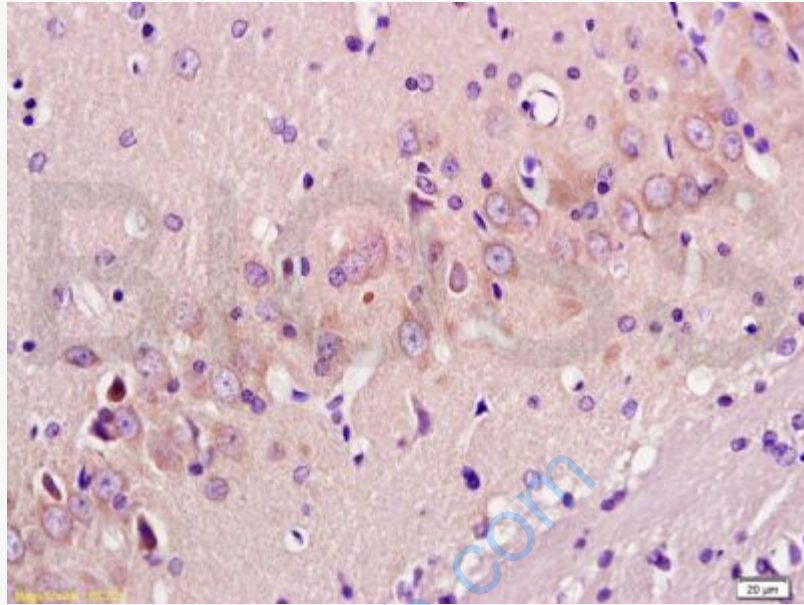
Heart(Mouse) Lysate at 40 ug

Primary: Anti- GAP43(SL0154R) at 1/300 dilution

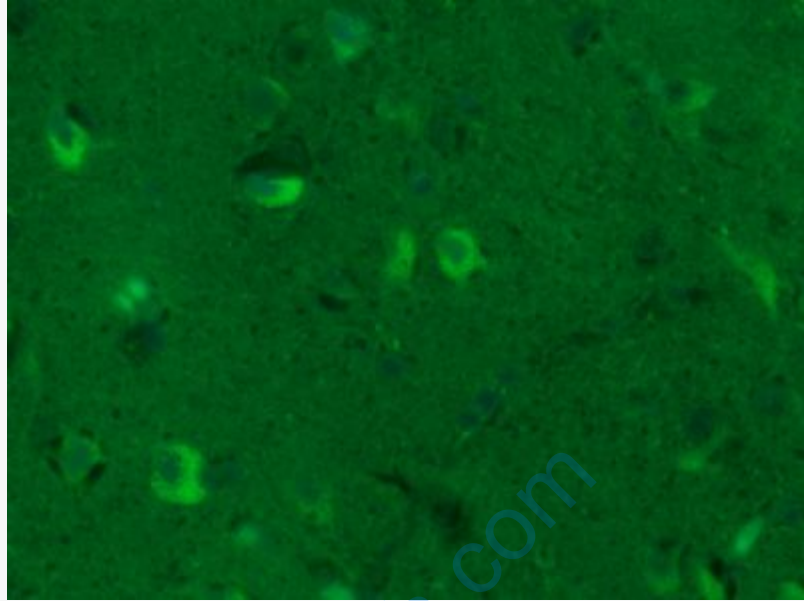
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 25/46kDa kD

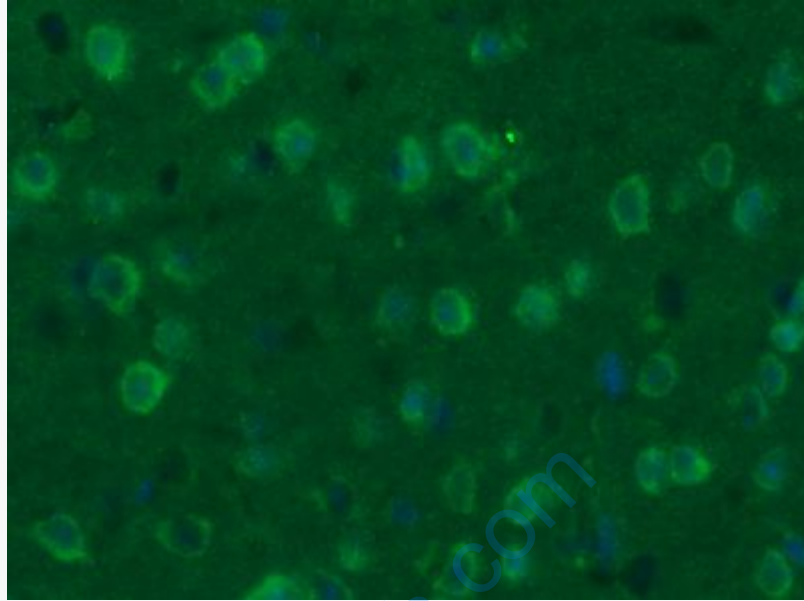
Observed band size: 25kD



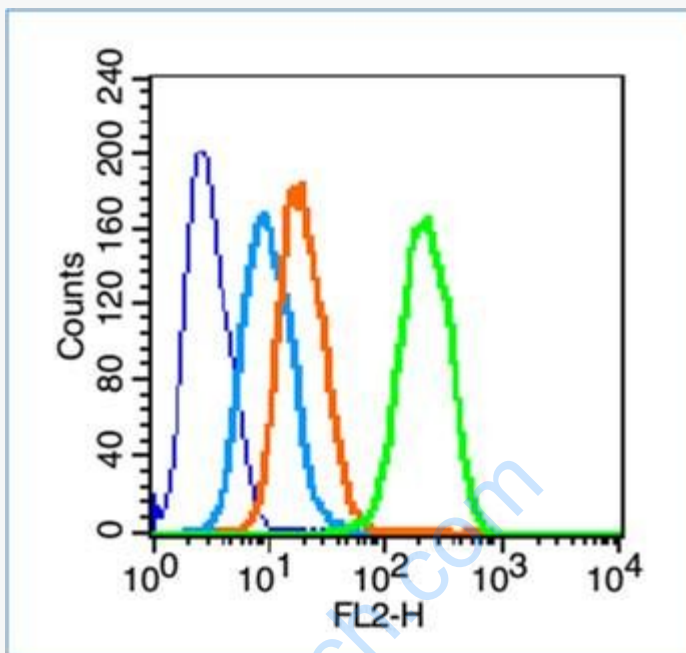
Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-GAP-43 Polyclonal Antibody, Unconjugated(SL0154R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Paraformaldehyde-fixed, paraffin embedded (Human 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 (GAP43) Polyclonal Antibody, Unconjugated (SL0154R) at 1:400 overnight at 4°C, followed by a conjugated Goat Anti-Rabbit IgG antibody (SL0154R) for 90 minutes, and DAPI for nuclei staining.



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 (GAP43) Polyclonal Antibody, Unconjugated (SL0154R) at 1:400 overnight at 4°C, followed by a conjugated Goat Anti-Rabbit IgG antibody (SL0154R) for 90 minutes, and DAPI for nuclei staining.



Blank control (blue line): HeLa cells (blue).

Primary Antibody (green line): Rabbit Anti-GAP43 antibody (SL0154R)

Dilution: 1 μg /10⁶ cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Secondary Antibody (white blue line): Goat anti-rabbit IgG-PE

Dilution: 1 μg /test.

Protocol

The cells were fixed with 70% methanol (Overnight at 4°C) and then permeabilized with 90% ice-cold methanol for 20 min at -20°C. Cells stained with Primary Antibody for 30 min at room temperature. The cells were then incubated in 1 X PBS/2%BSA/10% goat serum to block non-specific protein-protein interactions followed by the antibody for 15 min at room temperature. The secondary antibody used for 40 min at room temperature. Acquisition of 20,000 events was performed.

