10320 Camino Santa Fe, Suite G
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GAP-43 Antibody
Chicken polyclonal antibody
Catalog # AN1215

Specification

GAP-43 Antibody - Product Information

Application	**WB, IF**
Primary Accession	P07936
Reactivity	**Human, Mouse, Rat**
Host	**Chicken**
Clonality	**polyclonal**
Calculated MW	**43 KDa**

GAP-43 Antibody - Additional Information

Gene ID	**29423**
Gene Name	**GAP43**

Other Names
Neuromodulin, Axonal membrane protein GAP-43, Growth-associated protein 43, Protein F1, Gap43

Target/Specificity
Synthetic peptide corresponding to amino acid residues from the C-terminal region conjugated to KLH.

Dilution
WB~~ 1:2000
IF~~ 1:500

Format
Total IgY fraction

Antibody Specificity
Specific for the ~43k GAP-43 protein.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions
GAP-43 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Shipping
Blue Ice

GAP-43 Antibody - Protocols

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

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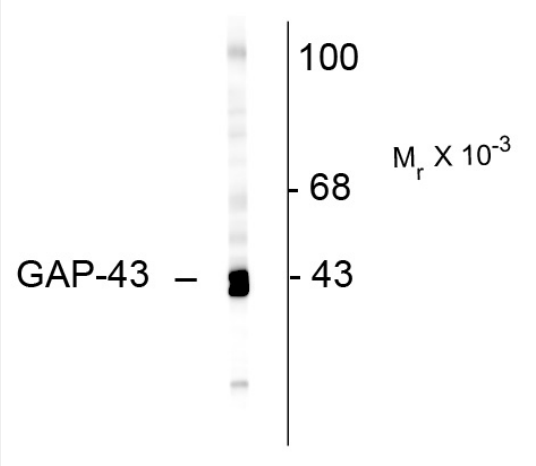
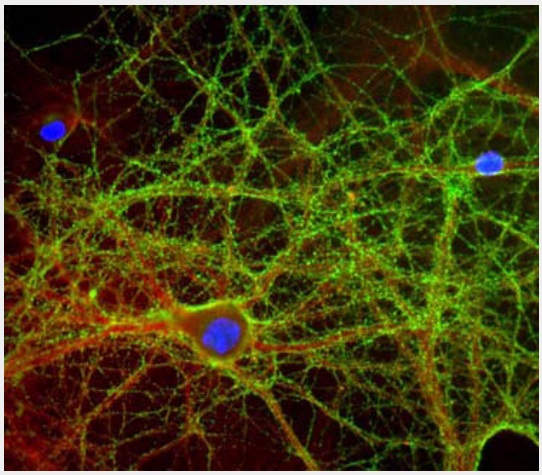
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

GAP-43 Antibody - Images



Western blot of rat cortex lysate showing specific immunolabeling of the ~ 43k GAP43protein.



Immunochemical staining of mixed neuron/glial cultures showing GAP43 (green) labeling of numerous axonal and dendritic profiles and anti-alpha II spectrin (red).

GAP-43 Antibody - Background

GAP-43 is thought to have an important role in development and plasticity because it is expressed at high levels in neuronal growth cones during development and during axonal regeneration (Benowitz and Routtenberg, 1997). There is also evidence from knockout animals that GAP-43 serves to amplify pathfinding signals from the growth cone (Strittmatter et al., 1995). GAP-43 is thought to mediate at least some of these effects via interaction with actin. Importantly, phosphorylation at Ser41 by protein kinase C modulates the interaction of GAP-43 with actin (He et al., 1997) and may also affect neurotransmitter release during forms of plasticity like LTP (Hulo et al., 2002).

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Benowitz LI, Routtenberg A (1997) Gap-43: An intrinsic determinant of neuronal development and plasticit. Trends Neurosci 20:84-91.
He, Q, Dent, EW, Meiri, KF (1997) Modulation of actin filament behavior by Gap-43 (neuromodulin) is dependent on the phosphorylation status of serine 41, the protein kinase C site. J Neurosci 17:3515-3524.
Hulo S, Alberi, S, Laux T, Muller D, Caroni P (2002) A point mutant of Gap-43 induces enhanced short-term and long-term hippocampal plasticity. Eur J Neurosci 15:1976-1982.
Strittmatter SM, Fankhauser C, Huang PL, Mashimo H, Fishman MC (1995) Neuronal path finding is abnormal in mice lacking the neuronal growth cone protein Gap-43," Cell 80:445-452.
Rayudu Gopalakrishna, Usha Gundimeda, Jason Eric Schiffman, and Thomas H. McNeill (2008) A Direct Redox Regulation of Protein Kinase C Isoenzymes Mediates Oxidant-induced Neuritogenesis in PC12 Cells J. Biol. Chem., May 2008; 283: 14430 - 14444.