

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

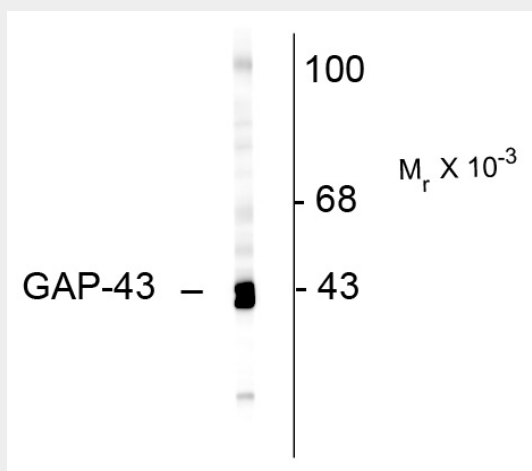
Blue Ice

GAP-43 Antibody - Protocols

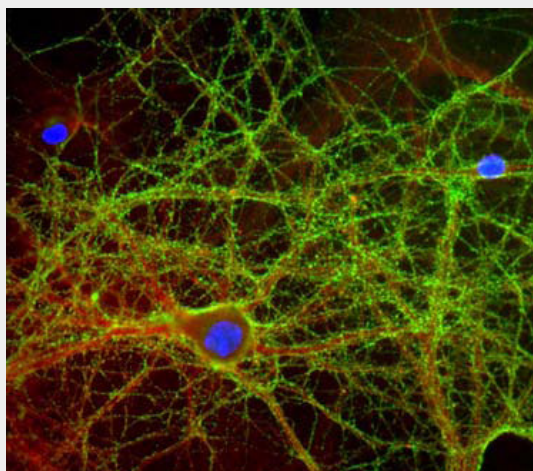
Provided below are standard protocols that you may find useful for product applications.

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

GAP-43 Antibody - Images



Western blot of rat cortex lysate showing specific immunolabeling of the ~ 43k GAP43 protein.



Immunochemical staining of mixed neuron/glia 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).

GAP-43 Antibody - References

- Benowitz LI, Routtenberg A (1997) Gap-43: An intrinsic determinant of neuronal development and plasticity. *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.