

Product Information



Gap-43 (Phospho-Ser⁴¹) Polyclonal Antibody

Item No. 10009400

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| Supplied as: | 100 µl of affinity-purified antibody in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg BSA per ml and 50% glycerol |
| Host: | Rabbit |
| Antigen: | Phosphopeptide corresponding to amino acid residues surrounding phospho-Ser ⁴¹ of Gap-43 |
| Cross Reactivity: | (+) Rat Gap-43; expected to react with bovine, canine, chicken, finch, human, mouse, non-human primate, <i>Xenopus</i> , and zebrafish Gap-43 |
| Stability: | ≥1 year at -20°C |
| Application: | The recommended starting dilution for western blot is 1:1,000. |

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.¹ There is also evidence from knockout animals that Gap-43 serves to amplify path finding signals from the growth cone.² 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 and may also affect neurotransmitter release during forms of plasticity like LTP.^{3,4}

References

1. Benowitz, L.I. and Routtenberg, A. Gap-43: An intrinsic determinant of neuronal development and plasticity. *Trends Neurosci.* **20**, 84-91 (1997).
2. Strittmatter, S.M., Fankhauser, C., Huang, P.L., *et al.* Neuronal path finding is abnormal in mice lacking the neuronal growth cone protein Gap-43. *Cell* **80**, 445-452 (1995).
3. He, Q., Dent, E.W., and Meiri, K.F. 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 (1997).
4. Hulo, S., Alberi, S., Laux, T., *et al.* A point mutant of Gap-43 induces enhanced short-term and long-term hippocampal plasticity. *Eur. J. Neurosci.* **15**, 1976-1982 (2002).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/10009400

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY; NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com