

## DESCRIPTION

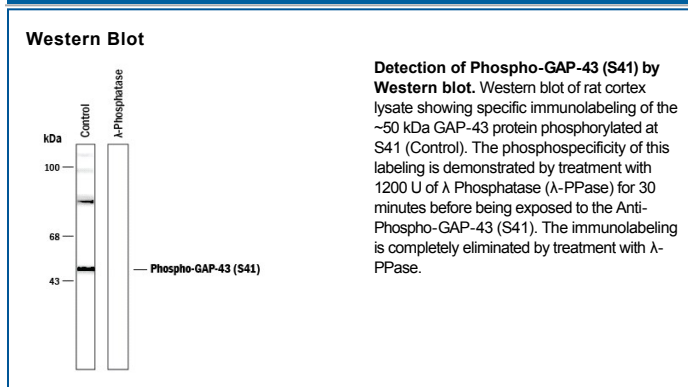
|                           |   |
|---------------------------|---|
| <b>Species Reactivity</b> | Human/Mouse/Rat/Bovine/Canine/Chicken/Primate/ <i>Xenopus</i> /Zebrafish  |
| <b>Specificity</b>        | Specific for the ~50 kDa GAP-43 protein phosphorylated at S41 in Western blots. In some tissues the antibody also recognizes a higher molecular weight protein, that is also recognized by the Pan GAP-43 antibody. This may be a GAP-43 aggregate or oligomer. |
| <b>Source</b>             | Polyclonal Rabbit IgG   |
| <b>Purification</b>       | Antigen Affinity-purified   |
| <b>Immunogen</b>          | Phosphopeptide corresponding to amino acid residues surrounding the phospho-S41 of GAP-43   |
| <b>Formulation</b>        | 100 µL in 10 mM HEPES (pH 7.5), 150 mM NaCl, 100 µg/mL BSA and 50% glycerol. See Certificate of Analysis for details.   |

## APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

|                     | <b>Recommended Concentration</b> | <b>Sample</b> |
|---------------------|----------------------------------|---------------|
| <b>Western Blot</b> | 1:1000 dilution                  | See Below     |

## DATA



## PREPARATION AND STORAGE

|                                |   |
|--------------------------------|---|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | For long-term storage, ≤ -20° C is recommended. Product is stable at ≤ -20° C for at least 1 year.                |

## BACKGROUND

GAP-43 (Growth Associated Protein 43 kDa), also known as Neuromodulin, is a 24 kDa, neuron growth cone-associated member of the neuromodulin family. Apparently due to its tertiary structure, it runs anomalously at 43 kDa on SDS-polyacrylamide gel. Rat GAP-43 is a 226 amino acid (aa) protein that contains an N-terminal lipid binding motif, an 11 aa IQ domain (IQ:Ile-Gln-X-Ser-etc) (aa 38 - 48), and a C-terminus with four potential serine phosphorylation sites. The molecule may utilize the IQ domain to bind calmodulin. Protein kinase C-mediated phosphorylation of the Serine at 41 within this site inhibits this interaction. Unphosphorylated, calmodulin-bound GAP-43 is always associated with neurite retraction, while S41 phosphorylated GAP-43 stabilizes actin filaments and promotes growth cone extension.