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| <b>Product name:</b>     | GIT1 (19X13) Rabbit Monoclonal Antibody                                                                                                                                                      |
| <b>Cat number:</b>       | MABN11448                                                                                                                                                                                    |
| <b>Conjugate:</b>        | Unconjugated                                                                                                                                                                                 |
| <b>Size:</b>             | 100µL                                                                                                                                                                                        |
| <b>Clone:</b>            | Monoclonal                                                                                                                                                                                   |
| <b>Concentration:</b>    | 1mg/ml                                                                                                                                                                                       |
| <b>Host:</b>             | Rabbit                                                                                                                                                                                       |
| <b>Isotype:</b>          | IgG                                                                                                                                                                                          |
| <b>Immunogen:</b>        | A synthetic peptide of human GIT1                                                                                                                                                            |
| <b>Reactivity:</b>       | Human,Rat                                                                                                                                                                                    |
| <b>Applications:</b>     | WB 1:1000-1:5000,IHC 1:100-1:200,IF-P 1:100-1:200                                                                                                                                            |
| <b>Molecular Weight:</b> | 84kDa                                                                                                                                                                                        |
| <b>Purification:</b>     | Affinity purification                                                                                                                                                                        |
| <b>Form:</b>             | Liquid                                                                                                                                                                                       |
| <b>Buffer:</b>           | Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% New type preservative N and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle. |
| <b>Storage:</b>          | Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.                                                                                                 |

**Background:**

GTPase-activating protein for the ADP ribosylation factor family. May serve as a scaffold to bring together molecules to form signaling modules controlling vesicle trafficking, adhesion and cytoskeletal organization. Increases the speed of cell migration, as well as the size and rate of formation of protrusions, possibly by targeting PAK1 to adhesions and the leading edge of lamellipodia. GTPase-activating protein for ADP ribosylation factor family members, including ARF1. Multidomain scaffold protein that interacts with numerous proteins and therefore participates in many cellular functions, including receptor internalization, focal adhesion remodeling, and signaling by both G protein-coupled receptors and tyrosine kinase receptors (By similarity). Through PAK1 activation, positively regulates microtubule nucleation during interphase (PubMed:27012601). Plays a role in the regulation of cytokinesis; for this function, may act in a pathway also involving ENTR1 and PTPN13 (PubMed:23108400). May promote cell motility both by regulating focal complex dynamics and by local activation of RAC1 (PubMed:10938112, PubMed:11896197). May act as scaffold for MAPK1/3 signal transduction in focal adhesions. Recruits MAPK1/3/ERK1/2 to focal adhesions after EGF stimulation via a Src-dependent pathway, hence stimulating cell migration (PubMed:15923189). Plays a role in brain development and function. Involved in the regulation of spine density and synaptic plasticity that is required for processes involved in learning (By similarity). Plays an important role in dendritic spine morphogenesis and synapse formation (PubMed:12695502, PubMed:15800193). In hippocampal neurons, recruits guanine nucleotide exchange factors (GEFs), such as ARHGEF7/beta-PIX, to the synaptic membrane. These in turn locally activate RAC1, which is an essential step for spine morphogenesis and synapse formation (PubMed:12695502). May contribute to the organization of presynaptic active zones through oligomerization and formation of a Piccolo/PCLO-based protein network, which includes ARHGEF7/beta-PIX and FAK1 (By similarity). In neurons, through its interaction with liprin-alpha family members, may be required for AMPA receptor (GRIA2/3) proper targeting to the cell membrane (By similarity). In complex with GABA(A) receptors and ARHGEF7, plays a crucial role in regulating GABA(A) receptor synaptic stability, maintaining GPHN/gephyrin scaffolds and hence GABAergic inhibitory synaptic transmission, by locally coordinating RAC1 and PAK1 downstream effector activity, leading to F-actin stabilization (PubMed:25284783). May also be important for RAC1 downstream signaling pathway through PAK3 and regulation of neuronal inhibitory transmission at presynaptic input (By similarity). Required for successful bone regeneration during fracture healing (By similarity). The function in intramembranous ossification may, at least partly, exerted by macrophages in which GIT1 is a key negative regulator of redox homeostasis, IL1B production, and glycolysis, acting through the ERK1/2/NRF2/NFE2L2 axis (By similarity). May play a role in angiogenesis during fracture healing (By similarity). In this process, may regulate activation of the canonical NF-kappa-B signal in bone mesenchymal stem cells by enhancing the interaction between NEMO and 'Lys-63'-ubiquitinated RIPK1/RIP1, eventually leading to enhanced production of VEGFA and others angiogenic factors (PubMed:31502302). Essential for VEGF signaling through the activation of phospholipase C-gamma and ERK1/2, hence may control endothelial cell proliferation and angiogenesis (PubMed:19273721).