Anti-EPS8 antibody

Description	Unconjugated Rabbit polyclonal to EPS8

Model	STJ190210
Host	Rabbit
Reactivity	Human, Mouse
Applications	ELISA, WB
Immunogen	Synthesized peptide derived from human EPS8 protein.
Immunogen Region	130-210aa
Gene ID	2059
Gene Symbol	EPS8
Dilution range	WB 1:500-2000 ELISA 1:5000-20000
Specificity	EPS8 Polyclonal Antibody detects endogenous levels of protein.
Tissue Specificity	Expressed in all tissues analyzed, including heart, brain, placenta, lung, liver, skeletal muscle, kidney and pancreas. Expressed in all epithelial and fibroblastic lines examined and in some, but not all, hematopoietic cells.
Purification	EPS8 antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.
Note	For Research Use Only (RUO).
Protein Name	Epidermal growth factor receptor kinase substrate 8
Molecular Weight	90 kDa
Clonality	Polyclonal

Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid form in PBS containing 50% glycerol,and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:3420OMIM:600206
Alternative Names	Epidermal growth factor receptor kinase substrate 8
Function	Signaling adapter that controls various cellular protrusions by regulating actin cytoskeleton dynamics and architecture. Depending on its association with other signal transducers, can regulate different processes. Together with SOS1 and ABI1, forms a trimeric complex that participates in transduction of signals from Ras to Rac by activating the Rac-specific guanine nucleotide exchange factor (GEF) activity. Acts as a direct regulator of actin dynamics by binding actin filaments and has both barbed-end actin filament capping and actin bundling activities depending on the context. Displays barbed-end actin capping activity when associated with ABI1, thereby regulating actin-based motility process: capping activity is auto-inhibited and inhibition is relieved upon ABI1 interaction. Also shows actin bundling activity when associated with BAIAP2, enhancing BAIAP2-dependent membrane extensions and promoting filopodial protrusions. Involved in the regulation of processes such as axonal filopodia growth, stereocilia length, dendritic cell migration and cancer cell migration and invasion. Acts as a regulator of axonal filopodia formation in neurons: in the absence of neurotrophic factors, negatively regulates axonal filopodia formation via actin-capping activity. In contrast, it is phosphorylated in the presence of BDNF leading to inhibition of its actin-capping activity and stimulation of filopodia formation. Component of a complex with WHRN and MYO15A that localizes at stereocilia tips and is required for elongation of the stereocilia actin core. Indirectly involved in cell cycle progression; its degradation following ubiquitination being required during G2 phase to promote cell shape changes.
Sequence and Domain Family	The effector region is required for activating the Rac-specific guanine nucleotide exchange factor (GEF) activity. It mediates both barbed-end actin capping and actin bundling activities. The capping activity is mediated by an amphipathic helix that binds within the hydrophobic pocket at the barbed ends of actin blocking further addition of actin monomers, while the bundling activity is mediated by a compact 4 helix bundle, which contacts 3 actin subunits along the filament . The SH3 domain mediates interaction with SHB.
Cellular Localization	Cytoplasm, cell cortex Cell projection, ruffle membrane Cell projection, growth cone Cell projection, stereocilium Cell junction, synapse, synaptosome. Localizes at the tips of the stereocilia of the inner and outer hair cells . Localizes to the midzone of dividing cells.
Post-translational Modifications	Ubiquitinated by the SCF(FBXW5) E3 ubiquitin-protein ligase complex during G2 phase, leading to its transient degradation and subsequent cell shape changes required to allow mitotic progression. Reappears at the midzone of dividing cells . Phosphorylation at Ser-625 and Thr-629 by MAPK following BDNF treatment promotes removal from actin and filopodia formation . Phosphorylated by several receptor tyrosine kinases.

St John's Laboratory Ltd

F +44 (0)207 681 2580
T +44 (0)208 223 3081

W http://www.stjohnslabs.com/
E info@stjohnslabs.com