

Anti-AKAP 13 antibody



Description	Rabbit polyclonal to AKAP 13.
Model	STJ91526
Host	Rabbit
Reactivity	Human
Applications	ELISA, IHC, WB
Immunogen	Synthesized peptide derived from human AKAP 13
Immunogen Region	690-770 aa, Internal
Gene ID	11214
Gene Symbol	AKAP13
Dilution range	WB 1:500-1:2000IHC 1:100-1:300ELISA 1:20000
Specificity	AKAP 13 Polyclonal Antibody detects endogenous levels of AKAP 13 protein.
Tissue Specificity	Detected in mammary gland . Detected in heart (at protein level) . Expressed as a 5.3 kb transcript in hematopoietic cells, skeletal muscle, lung, heart, estrogen-responsive reproductive tissues, including breast ductal epithelium. Also found in testis and breast cancer cell lines. Predominantly expressed as a 10 kb transcript in the heart and at lower levels in the lung, placenta, kidney, pancreas, skeletal muscle and liver. Transcripts of between 6-9 kb are also expressed in myeloid and lymphoid lineages
Purification	The antibody was affinity-purified from rabbit antiserum by affinity-chromatography using epitope-specific immunogen.

Note	For Research Use Only (RUO).
Protein Name	A-kinase anchor protein 13 AKAP-13 AKAP-Lbc Breast cancer nuclear receptor-binding auxiliary protein Guanine nucleotide exchange factor Lbc Human thyroid-anchoring protein 31 Lymphoid blast crisis oncogene LBC onc
Molecular Weight	307 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	Liquid in PBS containing 50% glycerol, 0.5% BSA and 0.02% sodium azide.
Concentration	1 mg/ml
Storage Instruction	Store at -20°C, and avoid repeat freeze-thaw cycles.
Database Links	HGNC:371OMIM:604686
Alternative Names	A-kinase anchor protein 13 AKAP-13 AKAP-Lbc Breast cancer nuclear receptor-binding auxiliary protein Guanine nucleotide exchange factor Lbc Human thyroid-anchoring protein 31 Lymphoid blast crisis oncogene LBC onc
Function	Scaffold protein that plays an important role in assembling signaling complexes downstream of several types of G protein-coupled receptors. Activates RHOA in response to signaling via G protein-coupled receptors via its function as Rho guanine nucleotide exchange factor . May also activate other Rho family members . Part of a kinase signaling complex that links ADRA1A and ADRA1B adrenergic receptor signaling to the activation of downstream p38 MAP kinases, such as MAPK11 and MAPK14 . Part of a signaling complex that links ADRA1B signaling to the activation of RHOA and IKBKB/IKKB, leading to increased NF-kappa-B transcriptional activity . Part of a RHOA-dependent signaling cascade that mediates responses to lysophosphatidic acid (LPA), a signaling molecule that activates G-protein coupled receptors and potentiates transcriptional activation of the glucocorticoid receptor NR3C1 . Part of a signaling cascade that stimulates MEF2C-dependent gene expression in response to lysophosphatidic acid (LPA) . Part of a signaling pathway that activates MAPK11 and/or MAPK14 and leads to increased transcription activation of the estrogen receptors ESR1 and ESR2 . Part of a signaling cascade that links cAMP and EGFR signaling to BRAF signaling and to PKA-mediated phosphorylation of KSR1, leading to the activation of downstream MAP kinases, such as MAPK1 or MAPK3 . Functions as scaffold protein that anchors cAMP-dependent protein kinase (PKA) and PRKD1. This promotes activation of PRKD1, leading to increased phosphorylation of HDAC5 and ultimately cardiomyocyte hypertrophy . Has no guanine nucleotide exchange activity on CDC42, Ras or Rac . Required for normal embryonic heart development, and in particular for normal sarcomere formation in the developing cardiomyocytes . Plays a role in cardiomyocyte growth and cardiac hypertrophy in response to activation of the beta-adrenergic receptor by phenylephrine or isoproterenol . Required for normal adaptive cardiac hypertrophy in response to pressure overload . Plays a role in osteogenesis .

Sequence and Domain Family	The DH domain is sufficient for interaction with RHOA, and for guanine nucleotide exchange (GEF) activity with RHOA . Forms that lack C-terminal regulatory domains have transforming activity and function as oncogenes . The PH domain does not play a role in lipid-binding. Instead, it inhibits the guanine nucleotide exchange (GEF) activity of the isolated DH domain (in vitro). The C-terminal domain after the PH domain is involved in protein-protein interactions that are required for normal, compensatory cardiac hypertrophy in response to pressure overload.
Cellular Localization	Cytoplasm, cytosol Cytoplasm Cytoplasm, cell cortex Nucleus Membrane. Colocalizes with the actin cytoskeleton at the cell cortex.

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