

Rabbit anti-Human, Mouse AKAP13 Polyclonal Antibody | anti-AKAP13 antibody

AKAP13 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA323951	Rabbit	Human, Mouse	ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

AKAP13; Polyclonal Antibody; AKAP13 Antibody; A kinase (PRKA) anchor protein 13; A kinase anchor protein 13; A kinase anchoring protein; A-kinase anchor protein 13; AKAP 13; AKAP Lbc; AKAP-13; AKAP-Lbc; AKP13_HUMAN; ARHGEF13; Breast cancer nuclear receptor binding auxiliary protein; Breast cancer nuclear receptor-binding auxiliary protein; BRX; c lbc; FLJ11952; FLJ43341; Guanine nucleotide exchange factor Lbc; HA 3; HA3; Ht 31; Ht31; Human thyroid anchoring protein 31; Human thyroid-anchoring protein 31; LBC; LBC oncogene; Lymphoid blast crisis oncogene; Non oncogenic Rho GTPase specific GTP exchange factor; Non-oncogenic Rho GTPase-specific GTP exchange factor; p47; Protein kinase A anchoring protein 13; Protein kinase A-anchoring protein 13; PROTO LB; PROTO LBC; anti-AKAP13 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse
Clonality	Polyclonal
Isotype	IgG
Specificity	AKAP13 antibody detects endogenous levels of total AKAP13
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	1434
Applicable Applications for anti-AKAP13 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide
Subcellular Location	Cytoplasm; Cytoplasm. Nucleus and Membrane.
Tissue Specificity	Detected in mammary gland (PubMed:9627117). Detected in heart (at protein level) (PubMed:11546812). 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, a variety of epithelial tissues, and in skeletal muscle.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.



WB (Western Blot)

Western blot analysis of extracts from Jurkat cells using AKAP13 antibody. The lane on the left is treated with the antigen-specific peptide.



IHC (Immunohistochemistry)

AAA323951 at 1/100 staining Mouse lung tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



IF (Immunofluorescence)

AAA323951 staining Hela cells by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) antibody, diluted at 1/600, was used as secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-AKAP13 antibody	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 (PubMed:11546812, PubMed:15229649, PubMed:23090968, PubMed:25186459, PubMed:24993829). May also activate other Rho family members (PubMed:11546812). 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 (PubMed:17537920, PubMed:23716597, PubMed:21224381). 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 (PubMed:23090968). 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 (PubMed:16469733). Part of a signaling cascade that stimulates MEF2C-dependent gene expression in response to lysophosphatidic acid (LPA) (By similarity). Part of a signaling pathway that activates MAPK11 and/or MAPK14 and leads to increased transcription activation of the estrogen receptors ESR1 and ESR2 (PubMed:9627117, PubMed:11579095). 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 (PubMed:21102438). 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 (By similarity). Has no guanine nucleotide exchange activity on CDC42, Ras or Rac (PubMed:11546812). Required for normal embryonic heart development, and in particular for normal sarcomere formation in the developing cardiomyocytes (By similarity). Plays a role in cardiomyocyte growth and cardiac hypertrophy in response to activation of the beta-adrenergic receptor by phenylephrine or isoproterenol (PubMed:17537920, PubMed:23090968). Required for normal adaptive cardiac hypertrophy in response to pressure overload (PubMed:23716597). Plays a role in osteogenesis (By similarity). Subunit Structure: Interacts with the cAMP-dependent protein kinase (PKA) holoenzyme and with the regulatory subunit PRKAR2A (PubMed:11546812, PubMed:1618839, PubMed:15229649, PubMed:21102438, PubMed:11285229). Interacts with RHOA (PubMed:11546812, PubMed:17537920, PubMed:25186459, PubMed:24993829). Interacts also with RHOB and RHOC (PubMed:11546812). Identified in a ternary complex with RHOA and PRKAR2A (PubMed:11546812). Identified in a complex with NR3C1 and RHOA (PubMed:16469733). Interacts with BRAF and KSR1 (PubMed:21102438). Identified in a complex with BRAF and KSR1 (PubMed:21102438). Component of a signaling complex containing at least AKAP13, PKN1, MAPK14, ZAK and MAP2K3. Within this complex, AKAP13 interacts directly with PKN1, which in turn recruits MAPK14, MAP2K3 and ZAK (PubMed:21224381). Interacts (phosphorylated form) with YWHAB and YWHAZ (PubMed:15229649, PubMed:21224381). Interaction with YWHAB inhibits activation of RHOA, interferes with PKN1 binding and activation of MAP kinases (PubMed:15229649, PubMed:21224381). Interacts with GNA12 (PubMed:11546812). Interacts with IKBKB (PubMed:23090968). Interacts with ESR1, THRA, PPARG and NME2 (PubMed:9627117, PubMed:15249197). Interacts (via the C-terminal domain after the PH domain) with MEF2C and RXRB. Interacts (via the C-terminal domain after the PH domain) with PRKD1 (By similarity). Similarity: The DH domain is sufficient for interaction with RHOA, and for guanine nucleotide exchange (GEF) activity with RHOA (PubMed:24993829). Forms that lack C-terminal regulatory domains have transforming activity and function as oncogenes (PubMed:9891067).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.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	395627649
NCBI GeneID	11214
NCBI Accession #	NP_001257475.1
NCBI GenBank Nucleotide #	NM_001270546.1
UniProt Accession #	Q12802; Q14572; Q59FP6; Q86W90; Q8WXQ6; Q96JP6; Q96P79; Q9Y5T0; Q9Y5T6
Molecular Weight	Observed: 307 kD Predicted: 308 kDa
NCBI Official Full Name	A-kinase anchor protein 13 isoform 4
NCBI Official Synonym Full Names	A-kinase anchoring protein 13

NCBI Official Symbol	AKAP13
NCBI Official Synonym Symbols	BRX; LBC; p47; HA-3; Ht31; c-lbc; PRKA13; AKAP-13; AKAP-Lbc; ARHGEF13; PROTO-LB; PROTO-LBC
NCBI Protein Information	A-kinase anchor protein 13
UniProt Protein Name	A-kinase anchor protein 13
UniProt Gene Name	AKAP13
UniProt Synonym Gene Names	BRX1 PublicationManual assertion based on opinion iniRef.5; LBC oncogene1 PublicationManual assertion based on opinion iniRef.33; PRKA13

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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