Rabbit AKAP8 Polyclonal Antibody | anti-AKAP8 antibody

AKAP8 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA320968	**Rabbit**	**Human, Mouse, Rat**	**ELISA, Immunocytochemistry, Immunofluorescence, Immunohistochemistry, Western Blot**

PRODUCT SYNONYMS

AKAP8; Polyclonal Antibody; AKAP8 Antibody; A kinase (PRKA) anchor protein 8; A kinase anchor protein 8; A kinase anchor protein 95; A kinase anchor protein 95 kDa; A kinase anchor protein 95kDa; A-kinase anchor protein 8; A-kinase anchor protein 95 kDa; AKAP 8; AKAP 95; AKAP-8; AKAP-95; Akap8; AKAP8_HUMAN; AKAP95; DKFZp586B1222; anti-AKAP8 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	AKAP8 antibody detects endogenous levels of total AKAP8
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	692
Applicable Applications for anti-AKAP8 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	A synthesized peptide derived from human AKAP8
Subcellular Location	Nucleus Matrix. Associated with the nuclear matrix. Redistributed and detached from condensed chromatin during mitosis.
Tissue Specificity	Highly expressed in heart, liver, skeletal muscle, kidney and pancreas. Expressed in mature dendritic cells.
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES

WB (Western Blot)
Western blot analysis on Jurkat cell lysate using AKAP8 Antibody, The lane on the left is treated with the antigen-specific peptide.

IF (Immunofluorescence)
AAA320968 staining Daudi 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.

WB (Western Blot)
Western blot analysis on various tissue lysate using AKAP8 Antibody

IHC (Immunohiostchemistry)
AAA320968 at 1/100 staining human kidney tissue sections by IHC-P. The tissue was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The tissue 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)
AAA320968 staining Hela 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) Ab, diluted at 1/600, was used as the secondary antibody.

ADDITIONAL INFORMATION

Related Product Information for anti-AKAP8 antibody	Description: AKAP8 Anchoring protein that mediates the subcellular compartmentation of cAMP-dependent protein kinase (PKA type II). Belongs to the AKAP95 family. Binds to dimeric RII-alpha regulatory subunit of PKA during mitosis. Interacts (via C-terminus) with FIGN. Function: Anchoring protein that mediates the subcellular compartmentation of cAMP-dependent protein kinase (PKA type II) (PubMed:9473338). Acts as an anchor for a PKA-signaling complex onto mitotic chromosomes, which is required for maintenance of chromosomes in a condensed form throughout mitosis. Recruits condensin complex subunit NCAPD2 to chromosomes required for chromatin condensation; the function appears to be independent from PKA-anchoring (PubMed:10601332, PubMed:10791967, PubMed:11964380). May help to deliver cyclin D/E to CDK4 to facilitate cell cycle progression (PubMed:14641107). Required for cell cycle G2/M transition and histone deacetylation during mitosis. In mitotic cells recruits HDAC3 to the vicinity of chromatin leading to deacetylation and subsequent phosphorylation at 'Ser-10' of histone H3; in this function may act redundantly with AKAP8L (PubMed:16980585). Involved in nuclear retention of RPS6KA1 upon ERK activation thus inducing cell proliferation (PubMed:22130794). May be involved in regulation of DNA replication by acting as scaffold for MCM2 (PubMed:12740381). Enhances HMT activity of the KMT2 family MLL4/WBP7 complex and is involved in transcriptional regulation. In a teratocarcinoma cell line is involved in retinoic acid-mediated induction of developmental genes implicating H3 'Lys-4' methylation (PubMed:23995757). May be involved in recruitment of active CASP3 to the nucleus in apoptotic cells (PubMed:16227597). May act as a carrier protein of GJA1 for its transport to the nucleus (PubMed:26880274). Seems to involved in modulation of rDNA transcription. Preferentially binds GC-rich DNA in vitro and associates to GC-rich ribosomal RNA promoters (PubMed:26683827). Involved in modulation of Toll-like receptor signaling. Required for the cAMP-dependent suppression of TNF-alpha in early stages of LPS-induced macrophage activation; the function probably implicates targeting of PKA to NFKB1 (By similarity). Subunit Structure: Binds to the PKA RII-alpha regulatory subunit PRKAR2A (phosphorylated at 'Thr-54') during mitosis (PubMed:9473338, PubMed:10601332, PubMed:10764601, PubMed:11591814). Interacts (via C-terminus) with FIGN (By similarity). Interacts with NCAPD2, CCND1, MCM2, RPS6KA1, PDE4A (PubMed:10601332, PubMed:11964380, PubMed:11591814, PubMed:12740381, PubMed:14641107, PubMed:15470020, PubMed:22130794). Interacts with CCND3, CCNE1, DDX5, CASP3. Interacts with NFKB1; detetcted in the cytoplasm. Interacts with MYCBP; MYCBP is translocated to the nucleus and the interaction prevents the association of the PKA catalytic subunit leading to suppression of PKA activity (By similarity). Interacts with DPY30; mediating AKAP8 association with at least the MLL4/WBP7 HMT complex (PubMed:23995757). Interacts with HDAC3; increased during mitosis (PubMed:16980585). Interacts with GJA1; in the nucleus and in the nuclear membrane; the nuclear association increases with progress of cell cycle G1, S and G2 phase and decreases in M phase (PubMed:26880274). Post-translational Modifications: Phosphorylated on tyrosine residues probably by SRC subfamily protein kinases; multiple phosphorylation is leading to dissociation from nuclear structures implicated in chromatin structural changes. Similarity: Belongs to the AKAP95 family.

NCBI AND UNIPROT INFORMATION

NCBI GI #	5031579
NCBI GeneID	10270
NCBI Accession #	NP_005849.1
NCBI GenBank Nucleotide #	NM_005858.3
UniProt Accession #	O43823
Molecular Weight	Observed: 76 kDa Predicted: 77 kDa
NCBI Official Full Name	A-kinase anchor protein 8
NCBI Official Synonym Full Names	A-kinase anchoring protein 8
NCBI Official Symbol	AKAP8
NCBI Official Synonym Symbols	AKAP-8; AKAP95; AKAP 95; AKAP-95
NCBI Protein Information	A-kinase anchor protein 8
UniProt Protein Name	A-kinase anchor protein 8
UniProt Gene Name	**AKAP8**
UniProt Synonym Gene Names	AKAP95; AKAP-8; AKAP 95

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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