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AKAP95 Rabbit mAb

Catalog # AP76384

Product Information

Application	WB, IHC-P, IHC-F
Primary Accession	O43823
Reactivity	Rat, Human, Mouse
Host	Rabbit
Clonality	Monoclonal Antibody
Isotype	IgG
Conjugate	Unconjugated
Purification	Affinity Purified
Calculated MW	76108

Additional Information

Gene ID	10270
Other Names	AKAP8
Dilution	WB~~1:1000-1:5000 IHC-P~~N/A IHC-F~~N/A
Format	Liquid in 50mM Tris-Glycine(pH 7.4), 0.15M NaCl, 40%Glycerol, 0.01% sodium azide and 0.05% BSA.
Storage	Store at 4°C short term. Aliquot and store at -20°C long term. Avoid freeze/thaw cycles.

Protein Information

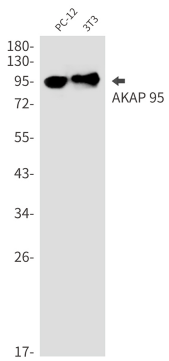
Name	AKAP8
Synonyms	AKAP95
Function	Anchoring protein that mediates the subcellular compartmentation of cAMP-dependent protein kinase (PKA type II) (PubMed:9473338). Acts as an anchor for a PKA-signaling complex onto mitotic chromosomes, which is required for maintenance of chromosomes in a condensed 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). May play a repressive role in the regulation of rDNA transcription. Preferentially binds GC-rich DNA in vitro. In cells, associates with ribosomal RNA (rRNA) chromatin, preferentially with rRNA promoter and transcribed regions (PubMed:26683827). Involved in modulation of Toll- like receptor signaling. Required for the cAMP-dependent suppression of TNF in early stages of LPS-induced macrophage activation; the function probably implicates targeting of PKA to NFKB1 (By similarity).
Cellular Location	Nucleus. Nucleus matrix. Nucleus, nucleolus. Cytoplasm {ECO:0000250|UniProtKB:Q9DBR0}. Note=Associated with the nuclear matrix in interphase and redistributes mostly to chromatin at mitosis However, mitotic chromatin localization has been questioned. Upon nuclear reassembly at the end of mitosis, is sequestered into the daughter nuclei where it re-acquires an interphase distribution Exhibits partial localization to the nucleolus in interphase, where it colocalizes with UBTF/UBF, suggesting localization to the fibrillary center and/or to the dense fibrillary component. Colocalizes with GJA1 at the nuclear membrane specifically during cell cycle G1/S phase
Tissue Location	Highly expressed in heart, liver, skeletal muscle, kidney and pancreas. Expressed in mature dendritic cells

Background

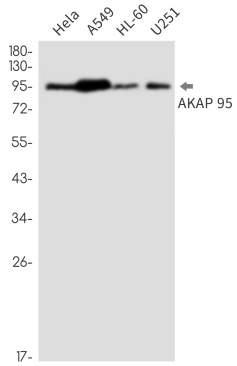
Anchoring protein that mediates the subcellular compartmentation of cAMP-dependent protein kinase (PKA type II).

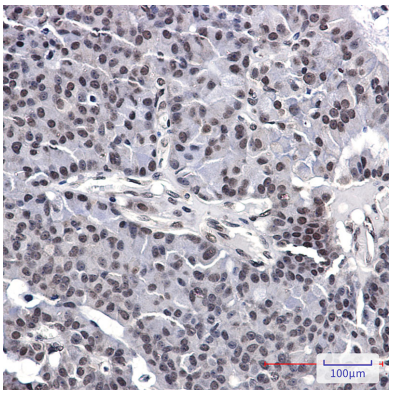
Images



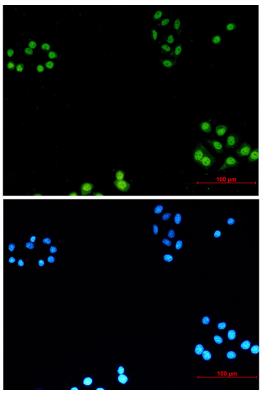
Western blot analysis of AKAP 95 in PC-12, 3T3 lysates using AKAP95 antibody.

Western blot analysis of AKAP 95 in Hela, A549, HL-60, U251 lysates using AKAP 95 antibody.





Immunohistochemistry analysis of paraffin-embedded Human breast cancer using AKAP 95 antibody. High-pressure and temperature Sodium Citrate pH 6.0 was used for antigen retrieval.



Immunocytochemistry analysis of AKAP 95 (green) in Hela using AKAP 95 antibody,and DAPI(blue).

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