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AKAP8 / AKAP95 Antibody (aa331-380)

Rabbit Polyclonal Antibody
Catalog # ALS15432

Specification

AKAP8 / AKAP95 Antibody (aa331-380) - Product Information

Application	**IF, WB, IHC**
Primary Accession	O43823
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**76kDa KDa**

AKAP8 / AKAP95 Antibody (aa331-380) - Additional Information

Gene ID 10270

Other Names
A-kinase anchor protein 8, AKAP-8, A-kinase anchor protein 95 kDa, AKAP 95, AKAP8, AKAP95

Target/Specificity
AKAP8 Antibody detects endogenous levels of total AKAP8 protein.

Reconstitution & Storage
Store at -20°C for up to one year.

Precautions
AKAP8 / AKAP95 Antibody (aa331-380) is for research use only and not for use in diagnostic or therapeutic procedures.

AKAP8 / AKAP95 Antibody (aa331-380) - 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-alpha 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

Volume
50 µl

AKAP8 / AKAP95 Antibody (aa331-380) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

AKAP8 / AKAP95 Antibody (aa331-380) - Images

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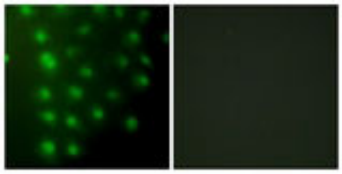
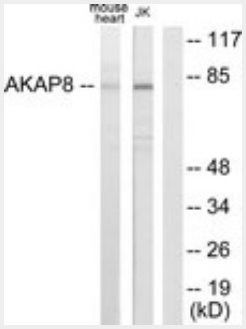
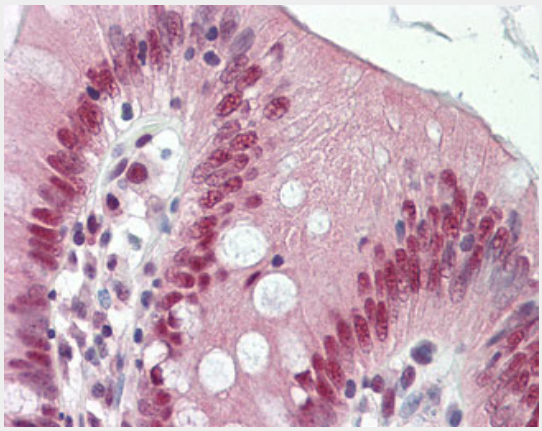


Immunofluorescence of HUVEC cells, using AKAP8 Antibody.



Western blot of extracts from mouse heart/Jurkat cells, using AKAP8 Antibody.



Anti-AKAP8 / AKAP95 antibody IHC of human colon.

AKAP8 / AKAP95 Antibody (aa331-380) - Background

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

AKAP8 / AKAP95 Antibody (aa331-380) - References

Eide T.,et al.Exp. Cell Res. 238:305-316(1998).
Grimwood J.,et al.Nature 428:529-535(2004).
Olsen J.V.,et al.Cell 127:635-648(2006).
Daub H.,et al.Mol. Cell 31:438-448(2008).
Dephoure N.,et al.Proc. Natl. Acad. Sci. U.S.A. 105:10762-10767(2008).