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KD-Validated Anti-A-kinase anchoring protein 8 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1158

Specification

KD-Validated Anti-A-kinase anchoring protein 8 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	O43823
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 76 kDa , observed, 95 kDa KDa**
Gene Name	**AKAP8**
Aliases	**AKAP8; A-Kinase Anchoring Protein 8; AKAP95; A Kinase (PRKA) Anchor Protein 8; A-Kinase Anchor Protein, 95kDa; A-Kinase Anchor Protein 8; AKAP 95; AKAP-8; A-Kinase Anchor Protein 95 KDa; DKFZp586B1222; DKFZP586B1222; AKAP-95**
Immunogen	**A synthesized peptide derived from AKAP 95**

KD-Validated Anti-A-kinase anchoring protein 8 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**10270**

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

KD-Validated Anti-A-kinase anchoring protein 8 Rabbit Monoclonal Antibody - 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

KD-Validated Anti-A-kinase anchoring protein 8 Rabbit Monoclonal Antibody - 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

KD-Validated Anti-A-kinase anchoring protein 8 Rabbit Monoclonal Antibody - Images

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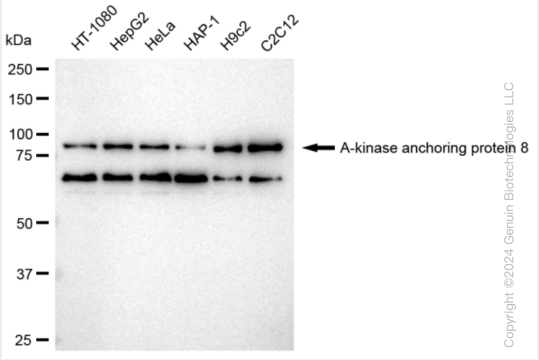
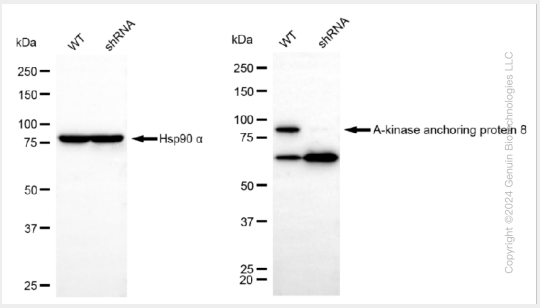
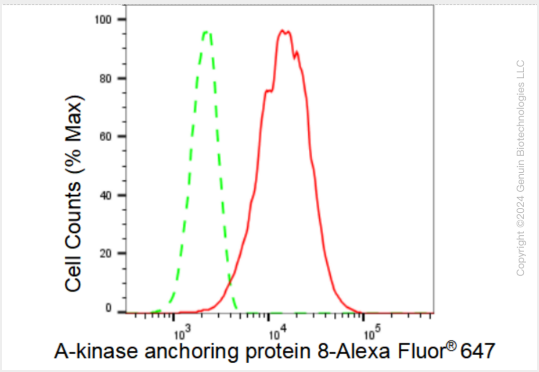


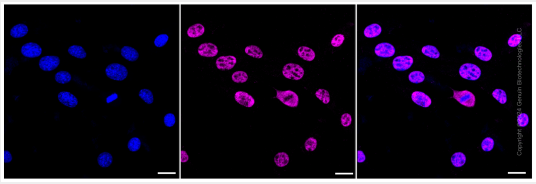
Western blotting analysis using anti-A-kinase anchoring protein 8 antibody (Cat#AGI1158). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-A-kinase anchoring protein 8 antibody (Cat#AGI1158, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-A-kinase anchoring protein 8 antibody (Cat#AGI1158). A-kinase anchoring protein 8 expression in wild type (WT) and A-kinase anchoring protein 8 shRNA knockdown (KD) HeLa cells with 30 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-A-kinase anchoring protein 8 antibody (Cat#AGI1158, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of A-kinase anchoring protein 8 expression in C2C12 cells using A-kinase anchoring protein 8 antibody (Cat#AGI1158, 1:2,000). Green, isotype control; red, A-kinase anchoring protein 8.



Immunocytochemical staining of C2C12 cells A-kinase anchoring protein 8 antibody (Cat#AGI1158, 1:1,000). Nuclei were stained blue with DAPI; A-kinase anchoring protein 8 was

stained magenta with Alexa Fluor® 647. Images were taken using Leica stellaris 5. Protein abundance based on laser Intensity and smart gain: High. Scale bar: 20 µm.