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KD-Validated Anti-USP9X Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1059

Specification

KD-Validated Anti-USP9X Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC, ICC**
Primary Accession	Q93008
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 292 kDa, observed, 292 kDa KDa**
Gene Name	**USP9X**
Aliases	**USP9X; Ubiquitin Specific Peptidase 9 X-Linked; DFFRX; MRX99; FAF; Ubiquitin Specific Protease 9, X Chromosome (Fat Facets-Like Drosophila); Probable Ubiquitin Carboxyl-Terminal Hydrolase FAF-X; Ubiquitin-Specific Protease 9, X Chromosome; Deubiquitinating Enzyme FAF-X; Ubiquitin Thioesterase FAF-X; Fat Facets In Mammals; HFAM; FAM; Ubiquitin Specific Peptidase 9, X-Linked (Fat Facets-Like, Drosophila); Ubiquitin Specific Protease 9, X-Linked (Fat Facets-Like, Drosophila); Ubiquitin-Specific Processing Protease FAF-X; Ubiquitin-Specific-Processing Protease FAF-X; Drosophila Fat Facets Related, X-Linked; Fat Facets Protein Related, X-Linked; Fat Facets Protein-Related, X-Linked; Ubiquitin Thiolesterase FAF-X; EC 3.4.19.12; EC 3.1.2.15; MRXS99F; XLID99; USP9**
Immunogen	**A synthesized peptide derived from human USP9x**

KD-Validated Anti-USP9X Rabbit Monoclonal Antibody - Additional Information

Gene ID	**8239**

Other Names
Ubiquitin carboxyl-terminal hydrolase 9X, 3.4.19.12, Deubiquitinating enzyme FAF-X, Fat facets in mammals, hFAM, Fat facets protein-related, X-linked, Ubiquitin thioesterase FAF-X, Ubiquitin-specific protease 9, X chromosome, Ubiquitin-specific-processing protease FAF-X, USP9X {ECO:0000303|PubMed:18254724, ECO:0000312|HGNC:HGNC:12632}

KD-Validated Anti-USP9X Rabbit Monoclonal Antibody - Protein Information

Name USP9X {ECO:0000303|PubMed:18254724, ECO:0000312|HGNC:HGNC:12632}

Function
Deubiquitinase involved both in the processing of ubiquitin precursors and of ubiquitinated proteins (PubMed:18254724, PubMed:19135894, PubMed:22371489, PubMed:25944111, PubMed:29626158, PubMed:30914461, PubMed:37454738). May therefore play an important regulatory role at the level of protein turnover by preventing degradation of proteins through the removal of conjugated ubiquitin (PubMed:18254724, PubMed:19135894, PubMed:22371489, PubMed:25944111, PubMed:29626158, PubMed:30914461, PubMed:37454738). Specifically hydrolyzes 'Lys-11'-, followed by 'Lys-63'-, 'Lys-48'- and 'Lys-6'- linked polyubiquitins chains (PubMed:30914461). Essential component of TGF-beta/BMP signaling cascade (PubMed:19135894). Specifically deubiquitinates monoubiquitinated SMAD4, opposing the activity of E3 ubiquitin-protein ligase TRIM33 (PubMed:19135894). Deubiquitinates alkylation repair enzyme ALKBH3 (PubMed:25944111). OTUD4 recruits USP7 and USP9X to stabilize ALKBH3, thereby promoting the repair of alkylated DNA lesions (PubMed:25944111). Deubiquitinates RNA demethylase enzyme ALKBH5, promoting its stability (PubMed:37454738). Deubiquitinates mTORC2 complex component RICTOR at 'Lys-294' by removing 'Lys-63'-linked polyubiquitin chains, stabilizing RICTOR and enhancing its binding to MTOR, thus promoting mTORC2 complex assembly (PubMed:33378666). Regulates chromosome alignment and segregation in mitosis by regulating the localization of BIRC5/survivin to mitotic centromeres (PubMed:16322459). Involved in axonal growth and neuronal cell migration (PubMed:24607389). Regulates cellular clock function by enhancing the protein stability and transcriptional activity of the core circadian protein BMAL1 via its deubiquitinating activity (PubMed:29626158). Acts as a regulator of peroxisome import by mediating deubiquitination of PEX5: specifically deubiquitinates PEX5 monoubiquitinated at 'Cys-11' following its retrotranslocation into the cytosol, resetting PEX5 for a subsequent import cycle (PubMed:22371489). Deubiquitinates PEG10 (By similarity). Inhibits the activation of the Hippo signaling pathway via deubiquitination of AMOTL2 at 'Lys-347' and 'Lys-408' which prohibits its interaction with and activation of LATS2. Loss of LATS2 activation and subsequent loss of YAP1 phosphorylation results in an increase in YAP1-driven transcription of target genes (PubMed:26598551, PubMed:34404733).

Cellular Location
Cytoplasm, cytosol. Cell projection, growth cone. Cytoplasm, cytoskeleton, cilium axoneme

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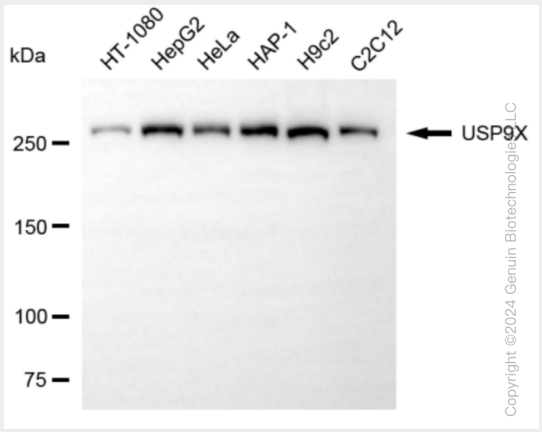
Tissue Location
Widely expressed in embryonic and adult tissues.

KD-Validated Anti-USP9X Rabbit Monoclonal Antibody - Protocols

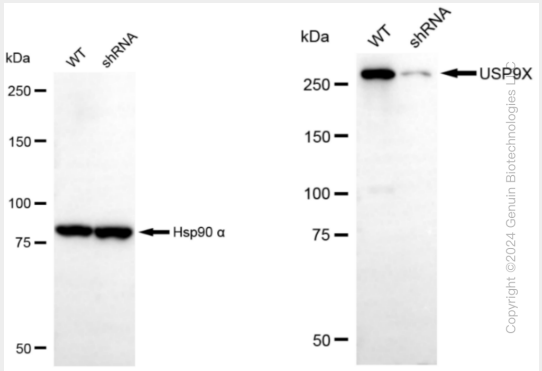
Provided below are standard protocols that you may find useful for product applications.

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

KD-Validated Anti-USP9X Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-USP9X antibody (Cat#AGI1059). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-USP9X antibody (Cat#AGI1059, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Western blotting analysis using anti-USP9X antibody (Cat#AGI1059). USP9X expression in wild-type (WT) and USP9X shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. Hsp90 α serves as a loading control. The blot was incubated with anti-USP9X antibody (Cat#AGI1059, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.

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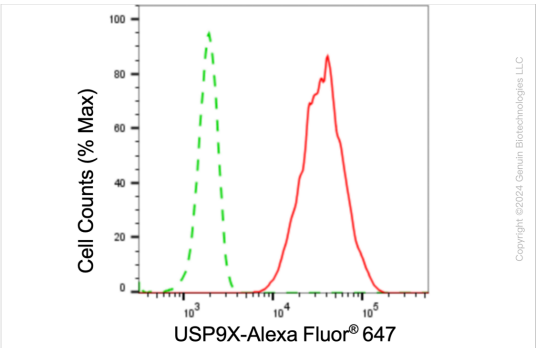
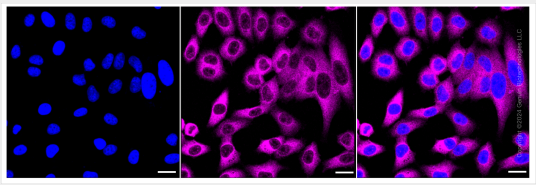


Flow cytometric analysis of USP9X expression in HepG2 cells using USP9X antibody (Cat#AGI1059, 1:2,000). Green, isotype control; red, USP9X.



Immunocytochemical staining of HepG2 cells with USP9X antibody (Cat#AGI1059, 1:1,000). Nuclei were stained blue with DAPI; USP9X 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.