

USP12 Antibody (N-term)
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2140a**Specification**

USP12 Antibody (N-term) - Product Information

Application	WB, IHC-P,E
Primary Accession	O75317
Other Accession	Q9D9M2 , A5D9H7 , Q5M981 , Q52KZ6 , NP_872294
Reactivity	Human, Mouse
Predicted	Xenopus, Bovine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	42858
Antigen Region	5-35

USP12 Antibody (N-term) - Additional Information**Gene ID** 219333**Other Names**

Ubiquitin carboxyl-terminal hydrolase 12, Deubiquitinating enzyme 12, Ubiquitin thioesterase 12, Ubiquitin-hydrolyzing enzyme 1, Ubiquitin-specific-processing protease 12, USP12, UBH1, USP12L1

Target/Specificity

This USP12 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 5-35 amino acids from the N-terminal region of human USP12.

Dilution

WB~~1:1000
IHC-P~~1:50~100

Format

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

Storage

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

USP12 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

USP12 Antibody (N-term) - Protein Information

Name USP12

Synonyms UBH1, USP12L1

Function Deubiquitinating enzyme that plays various roles in the regulation of the immune response and inflammation (PubMed:[19075014](#), PubMed:[27373336](#)). In complex with WDR48, acts as a potential tumor suppressor by positively regulating PHLPP1 stability (PubMed:[24145035](#)). During TCR engagement and activation, translocates into the cytoplasm and deubiquitinates its substrates LAT and TRAF1 and prevents their lysosome-dependent degradation to stabilize the TCR signaling complex at the plasma membrane (PubMed:[26811477](#)). Plays an essential role in the selective LPS-induced macrophage response through the activation of NF-kappa-B pathway (PubMed:[28063927](#)). In addition, promotes that antiviral immune response through targeting DNA sensor IFI16 to inhibit its proteasome-dependent degradation (PubMed:[37410794](#)). Participates in the interferon signaling pathway and antiviral response independently of its deubiquitinase activity by maintaining nuclear phosphorylated STAT1 levels via inhibition of its CREBBP-mediated acetylation and subsequent dephosphorylation (PubMed:[31899788](#)). Plays an intrinsic role in promoting the differentiation, activation and proliferation of CD4(+) T-cell by activating the NF-kappa-B signaling pathway through deubiquitinating and stabilizing B-cell lymphoma/leukemia 10/BCL10 (By similarity). In myeloid-derived suppressor cells promotes the activation of the NF-kappa-B via deubiquitination and stabilization of RELA (By similarity). Regulates the 'Lys-63'-linked polyubiquitin chains of BAX and thereby modulates the mitochondrial apoptotic process (PubMed:[36361894](#)).

Cellular Location

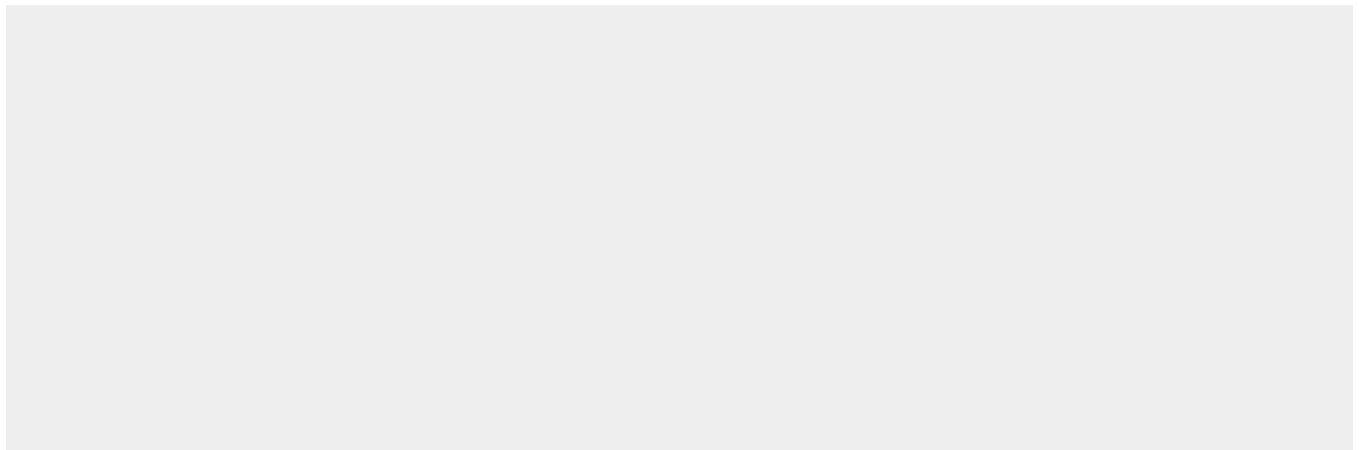
Nucleus. Cytoplasm. Cell membrane. Note=Translocates from the nucleus to the cytosol on TCR stimulation, while it translocates into the nucleus in IFN signaling. USP12/WDR20/WDR48 complex is localized mainly to the plasma membrane (PubMed:30466959).

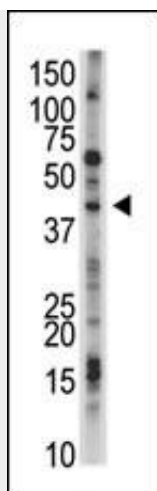
USP12 Antibody (N-term) - Protocols

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

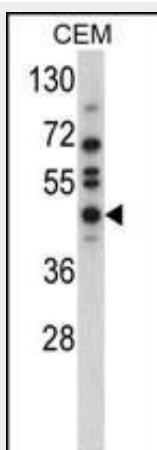
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

USP12 Antibody (N-term) - Images

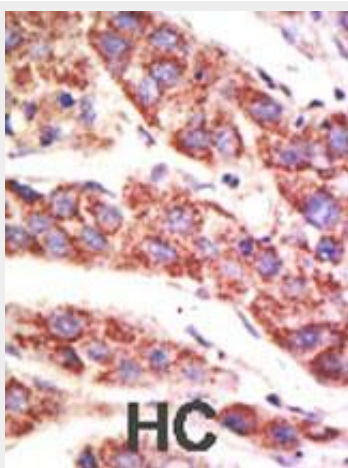




The anti-USP12 Pab (Cat. #AP2140a) is used in Western blot to detect USP12 in mouse kidney tissue lysate.



Western blot analysis of USP12 Antibody (N-term) (Cat. #AP2140a) in CEM cell line lysates (35ug/lane). USP12 (arrow) was detected using the purified Pab.



Formalin-fixed and paraffin-embedded human cancer tissue reacted with the primary antibody, which was peroxidase-conjugated to the secondary antibody, followed by AEC staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated. BC = breast carcinoma; HC = hepatocarcinoma.

USP12 Antibody (N-term) - Background

Modification of target proteins by ubiquitin participates in a wide array of biological functions. Proteins destined for degradation or processing via the 26 S proteasome are coupled to multiple copies of ubiquitin. However, attachment of ubiquitin or ubiquitin-related molecules may also result in changes in subcellular distribution or modification of protein activity. An additional level of ubiquitin regulation, deubiquitination, is catalyzed by proteases called deubiquitinating enzymes, which fall into four distinct families. Ubiquitin C-terminal hydrolases, ubiquitin-specific processing proteases (USPs),¹ OTU-domain ubiquitin-aldehyde-binding proteins, and Jab1/Pad1/MPN-domain-containing metallo-enzymes. Among these four families, USPs represent the most widespread and represented deubiquitinating enzymes across evolution. USPs tend to release ubiquitin from a conjugated protein. They display similar catalytic domains containing conserved Cys and His boxes but divergent N-terminal and occasionally C-terminal extensions, which are thought to function in substrate recognition, subcellular localization, and protein-protein interactions.

USP12 Antibody (N-term) - References

Hansen-Hagge, T.E., et al., Genomics 49(3):411-418 (1998).