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USP14 Antibody (N-term)
Mouse Monoclonal Antibody (Mab)
Catalog # AW5187

Specification

USP14 Antibody (N-term) - Product Information

Application	**WB, FC,E**
Primary Accession	P54578
Reactivity	**Human, Mouse, Rat**
Host	**Mouse**
Clonality	**Monoclonal**
Calculated MW	**H=56;M=56;Rat=56 KDa**
Isotype	**IgG1**
Antigen Source	**Human**

USP14 Antibody (N-term) - Additional Information

Gene ID 9097

Antigen Region
1-474

Other Names
USP14;TGT; Ubiquitin carboxyl-terminal hydrolase 14; Ubiquitin carboxyl-terminal hydrolase 14; Deubiquitinating enzyme 14; Ubiquitin carboxyl-terminal hydrolase 14; Ubiquitin thioesterase 14; Ubiquitin carboxyl-terminal hydrolase 14; Ubiquitin-specific-processing protease 14

Dilution
WB~~1:1000
FC~~1:25

Target/Specificity
Purified His-tagged USP14 protein was used to produced this monoclonal antibody.

Format
Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, 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
USP14 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

USP14 Antibody (N-term) - Protein Information

Name USP14

Synonyms TGT

Function
Proteasome-associated deubiquitinase which releases ubiquitin from the proteasome targeted ubiquitinated proteins (PubMed:35145029). Ensures the regeneration of ubiquitin at the proteasome (PubMed:18162577, PubMed:28396413). Is a reversibly associated subunit of the proteasome and a large fraction of proteasome-free protein exists within the cell (PubMed:18162577). Required for the degradation of the chemokine receptor CXCR4 which is critical for CXCL12-induced cell chemotaxis (PubMed:19106094). Serves also as a physiological inhibitor of endoplasmic reticulum-associated degradation (ERAD) under the non-stressed condition by inhibiting the degradation of unfolded endoplasmic reticulum proteins via interaction with ERN1 (PubMed:19135427). Indispensable for synaptic development and function at neuromuscular junctions (NMJs) (By similarity). Plays a role in the innate immune defense against viruses by stabilizing the viral DNA sensor CGAS and thus inhibiting its autophagic degradation (PubMed:27666593). Inhibits OPTN-mediated selective autophagic degradation of KDM4D and thereby negatively regulates H3K9me2 and H3K9me3 (PubMed:35145029).

Cellular Location
Cytoplasm. Cell membrane; Peripheral membrane protein

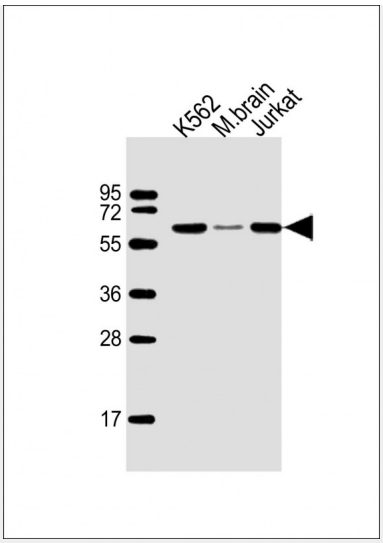
USP14 Antibody (N-term) - Protocols

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

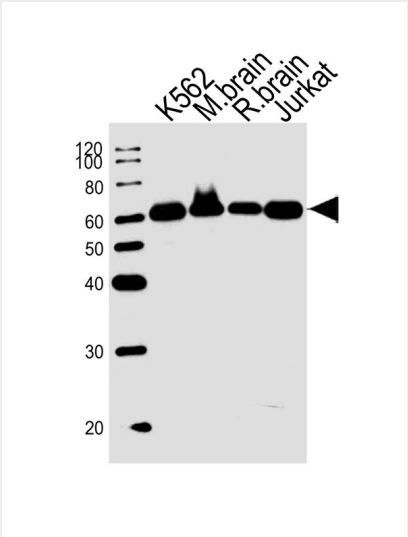
- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

USP14 Antibody (N-term) - Images

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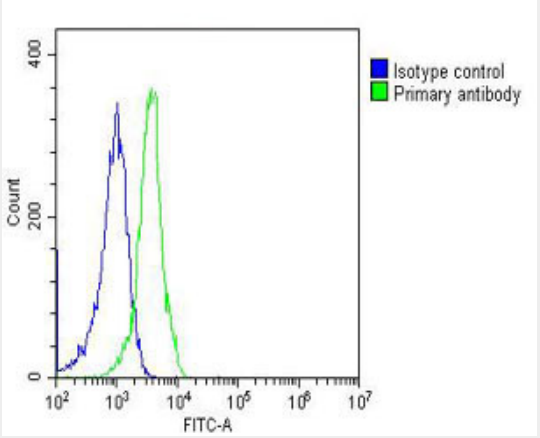


All lanes : Anti-USP14 Antibody (N-term) at 1:2000 dilution Lane 1: K562 whole cell lysate Lane 2: mouse brain whole cell lysate Lane 3: Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 56 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



Western blot analysis of lysates from K562 cell line,mouse brain,rat brain tissue,Jurkat cell line (from left to right), using USP14 Antibody (N-term)(Cat. #AW5187). AW5187 was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.Lysates at 20ug per lane.

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Overlay histogram showing Jurkat cells stained with AW5650(green line). The cells were fixed with 2% paraformaldehyde (10 min) and then permeabilized with 90% methanol for 10 min. The cells were then icubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AW5187, 1:25 dilution) for 60 min at 37ºC. The secondary antibody used was Goat-Anti-Mouse IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OJ192088) at 1/200 dilution for 40 min at 37ºC. Isotype control antibody (blue line) was mouse IgG1 (1µg/1x10^6 cells) used under the same conditions. Acquisition of >10, 000 events was performed.

USP14 Antibody (N-term) - Background

Proteasome-associated deubiquitinase which releases ubiquitin from the proteasome targeted ubiquitinated proteins. Ensures the regeneration of ubiquitin at the proteasome. Is a reversibly associated subunit of the proteasome and a large fraction of proteasome-free protein exists within the cell. Required for the degradation of the chemokine receptor CXCR4 which is critical for CXCL12-induced cell chemotaxis. Serves also as a physiological inhibitor of endoplasmic reticulum-associated degradation (ERAD) under the non-stressed condition by inhibiting the degradation of unfolded endoplasmic reticulum proteins via interaction with ERN1. Indispensable for synaptic development and function at neuromuscular junctions (NMJs).

USP14 Antibody (N-term) - References

Deshpande K.L., et al. Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases.
Kalnine N., et al. Submitted (MAY-2003) to the EMBL/GenBank/DDBJ databases.
Reuter T.Y., et al. Exp. Cell Res. 289:211-221(2003).
Carrascal M., et al. J. Proteome Res. 7:5167-5176(2008).
Koulich E., et al. Mol. Biol. Cell 19:1072-1082(2008).