

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

**Specification**

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**USP14 Antibody (N-term) - Product Information**

Application	WB, FC,E
Primary Accession	<a href="#">P54578</a>
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:<a href="http://www.uniprot.org/citations/35145029" target="\_blank">35145029</a>). Ensures the regeneration of ubiquitin at the proteasome (PubMed:<a href="http://www.uniprot.org/citations/18162577" target="\_blank">18162577</a>, PubMed:<a href="http://www.uniprot.org/citations/28396413" target="\_blank">28396413</a>). Is a reversibly associated subunit of the proteasome and a large fraction of proteasome-free protein exists within the cell (PubMed:<a href="http://www.uniprot.org/citations/18162577" target="\_blank">18162577</a>). Required for the degradation of the chemokine receptor CXCR4 which is critical for CXCL12-induced cell chemotaxis (PubMed:<a href="http://www.uniprot.org/citations/19106094" target="\_blank">19106094</a>). 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:<a href="http://www.uniprot.org/citations/19135427" target="\_blank">19135427</a>). 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:<a href="http://www.uniprot.org/citations/27666593" target="\_blank">27666593</a>). Inhibits OPTN-mediated selective autophagic degradation of KDM4D and thereby negatively regulates H3K9me2 and H3K9me3 (PubMed:<a href="http://www.uniprot.org/citations/35145029" target="\_blank">35145029</a>).

**Cellular Location**

Cytoplasm. Cell membrane; Peripheral membrane protein

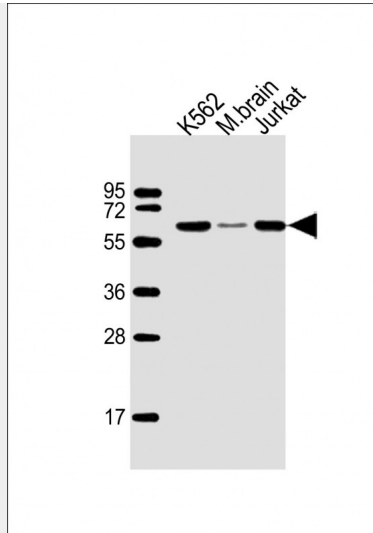
**USP14 Antibody (N-term) - Protocols**

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

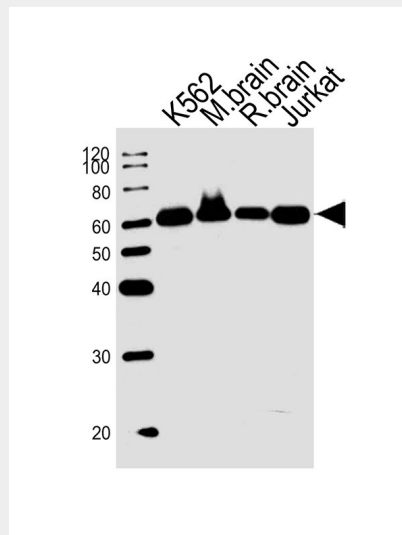
- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**USP14 Antibody (N-term) - Images**

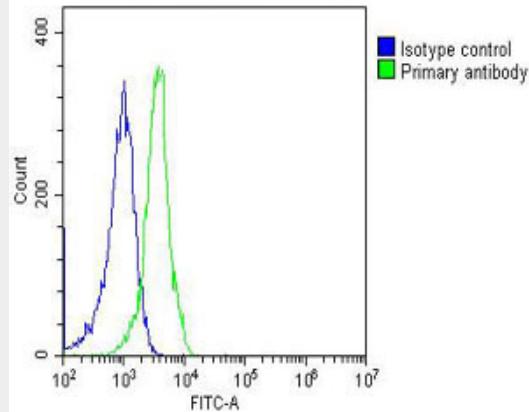




All lanes : Anti-USP14 Antibody (N-term) at 1:2000 dilution Lane 1: K562 whole cell lysate Lane 2: mouse brain whole cell lysate Lane 3: Jurkat whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-mouse IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size :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



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 incubated in 2% bovine serum albumin to block non-specific protein-protein interactions followed by the antibody (AW5187, 1:25 dilution) for 60 min at 37°C. The secondary antibody used was Goat-Anti-Mouse IgG, DyLight® 488 Conjugated Highly Cross-Adsorbed(OJ192088) at 1/200 dilution for 40 min at 37°C. Isotype control antibody (blue line) was mouse IgG1 (1µg/1x10<sup>6</sup> 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.
- Kalnina 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).