

## USP14 Polyclonal Antibody

<b>ALTERNATE NAMES:</b>	Deubiquitinating enzyme 14, TGT, Ubiquitin carboxyl-terminal hydrolase 14, Ubiquitin-specific processing protease 14, Ubiquitin thioesterase 14, Ubiquitin-specific-processing protease 14
<b>CATALOG #:</b>	6134-50
<b>AMOUNT:</b>	50 µg
<b>HOST:</b>	Chicken
<b>ISOTYPE:</b>	IgG
<b>IMMUNOGEN:</b>	Recombinant full length protein
<b>PURIFICATION:</b>	Purified from Egg Yolk
<b>FORM:</b>	Liquid
<b>FORMULATION:</b>	50 µg of antibody in PBS containing 10% glycerol
<b>PREDICTED MW:</b>	68 kDa
<b>SPECIES REACTIVITY:</b>	Human
<b>STORAGE CONDITIONS:</b>	Store at -20°C. Do not aliquot the antibody.

**DESCRIPTION:** Ubiquitinating enzymes (UBEs) catalyze protein ubiquitination, a reversible process countered by deubiquitinating enzyme (DUB) action. Five DUB subfamilies are recognized, including the USP, UCH, OTU, MJD, and JAMM enzymes. In humans, there are three proteasomal DUBs: PSMD14 (POH1/RPN11), UCH37 (UCH-L5), and Ubiquitin-Specific Protease 14, which is also known as the 60 kDa subunit of tRNA-guanine transglycosylase (USP14/TGT60 kDa). USP14 is recruited to the proteasome through its reversible association with the PSMD2 (S2/hRPN1) subunit of the 19S regulatory particle. Whereas PSMD14 appears to promote substrate degradation, USP14 is thought to antagonize substrate degradation. While the underlying mechanism for the opposing roles of these two proteasomal DUBs is still uncertain, it is thought that USP14 removes ubiquitin from substrate upon docking of the substrate with the 26S proteasome. Furthermore, USP14 trims ubiquitin residues from the distal end of the polyubiquitin chain, thus decreasing the affinity of the chain for the ubiquitin receptors of the proteasome, and allowing for enhanced substrate stability. Studies have elucidated a physiologic role for USP14 in regulating synaptic activity in mammals. Research studies have shown that targeting this activity with small molecule inhibitors has potential benefits for the treatment of neurodegenerative diseases and cancer.

**SPECIFICITY:** Human

**APPLICATION:** Western blot: Robust detection of 100 ng of recombinant protein was possible when antibody was used at a final concentration of 5 µg/mL

**Note:** *This information is only intended as a guide. The optimal dilutions must be determined by the user*

### RELATED PRODUCTS:

- USP4 Polyclonal Antibody (Cat. No. 6131-50)
- USP5 Polyclonal Antibody (Cat. No. 6132-50)
- USP8 Polyclonal Antibody (Cat. No. 6133-50)
- USP15 Polyclonal Antibody (Cat. No. 6135-50)
- USP34 Core Polyclonal Antibody (Cat. No. 6136-50)
- UCHL3 Polyclonal Antibody (Cat. No. 6128-50)
- UCHL5 Polyclonal Antibody (Cat. No. 6129-50)
- UCHL1 Polyclonal Antibody (Cat. No. 6130-50)

**FOR RESEARCH USE ONLY! Not to be used on humans.**