

For Research Use Only

# USP50 Polyclonal antibody

Catalog Number: 30239-1-AP



## Basic Information

<b>Catalog Number:</b> 30239-1-AP	<b>GenBank Accession Number:</b> BC146493	<b>Purification Method:</b> Antigen affinity purification
<b>Concentration:</b> 600 ug/ml	<b>GeneID (NCBI):</b> 373509	<b>Recommended Dilutions:</b> WB 1:500-1:3000
<b>Source:</b> Rabbit	<b>UNIPROT ID:</b> Q70EL3	
<b>Isotype:</b> IgG	<b>Full Name:</b> ubiquitin specific peptidase 50	
<b>Immunogen Catalog Number:</b> AG31275	<b>Calculated MW:</b> 339 aa, 39 kDa	
	<b>Observed MW:</b> 40 kDa	

## Applications

<b>Tested Applications:</b> WB, ELISA	<b>Positive Controls:</b> WB : mouse testis tissue,
<b>Species Specificity:</b> human, mouse	

## Background Information

USP50 (Ubiquitin Specific Peptidase 50) is a deubiquitinating enzyme that belongs to the USP family. It plays a key role in DNA replication, genome stability and cell cycle regulation. Recent studies have found that USP50 maintains the stability of the DNA replication process and telomere integrity by regulating the use of nuclease and deconjugating enzymes. During replication, USP50 was able to inhibit the harmful DNA2 nuclease activity and substitute the use of RecQ deconjugase, thereby preventing replication fork stalling and DNA damage. In addition, USP50 plays a role in the cell cycle G2/M phase transition, assembly of the NLRP3 inflammasome complex, and organization of nuclear speckles. Its loss of function leads to DNA double-strand breaks and telomere instability in cells under replication stress. These findings provide new insights into the understanding of the pathogenesis of genetic diseases and may offer potential targets for the treatment of diseases such as cancer and premature aging.

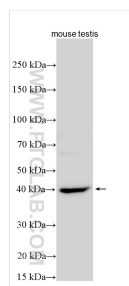
## Storage

**Storage:**  
Store at -20°C. Stable for one year after shipment.  
**Storage Buffer:**  
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.  
Aliquoting is unnecessary for -20°C storage

For technical support and original validation data for this product please contact:  
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## Selected Validation Data



Various lysates were subjected to SDS PAGE followed by western blot with 30239-1-AP (USP50 antibody) at dilution of 1:1500 incubated at room temperature for 1.5 hours.