

**#4891** Store at -20°C

## UBE1a/b Antibody


**Cell Signaling**  
TECHNOLOGY®

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source:	UniProt ID:	Entrez-Gene Id:
WB, IF-IC	H M R	Endogenous	110, 117	Rabbit	#P22314	7317

### Product Usage Information

#### Application

Western Blotting  
Immunofluorescence (Immunocytochemistry)

#### Dilution

1:1000  
1:25

### Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at –20°C. Do not aliquot the antibody.

### Specificity / Sensitivity

UBE1a/b Antibody detects endogenous levels of total UBE1a and UBE1b proteins.

### Source / Purification

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide surrounding Thr800 of human UBE1. Antibodies are purified by protein A and peptide affinity chromatography.

### Background

Ubiquitin can be covalently linked to many cellular proteins by the ubiquitination process, which targets proteins for degradation by the 26S proteasome. Three components are involved in the target protein-ubiquitin conjugation process. Ubiquitin is first activated by forming a thiolester complex with the ubiquitin-activating enzyme (UBE1 or E1). The activated ubiquitin is subsequently transferred to the ubiquitin-carrier protein E2, and then from E2 to ubiquitin ligase E3 for final delivery to the ε-amino group of the target protein lysine residue (1-3). Combinatorial interactions of different E2 and E3 proteins result in substrate specificity (4). UBE1 has two isoforms: UBE1a is a nuclear protein of 117 kDa while UBE1b is a nuclear and cytoplasmic protein of 110 kDa (5).

### Background References

1. Ciechanover, A. (1998) *EMBO J.* 17, 7151-7160.
2. Hochstrasser, M. (2000) *Nat. Cell Biol.* 2, E153-E157.
3. Hochstrasser, M. (2000) *Science* 289, 563-564.
4. DeSalle, L.M. and Pagano, M. (2001) *FEBS Lett.* 490, 179-189.
5. Stephen, A.G. et al. (1996) *J. Biol. Chem.* 271, 15608-15614.

### Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

**WB:** Western Blotting **IF-IC:** Immunofluorescence (Immunocytochemistry)

### Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster  
**X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse  
**GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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