

**UBD Antibody**  
**Catalog # ASC11926****Specification**

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**UBD Antibody - Product Information**

Application	<b>WB, IF</b>
Primary Accession	<a href="#">O15205</a>
Other Accession	<a href="#">NP_006389</a> , <a href="#">222352096</a>
Reactivity	<b>Human</b>
Host	<b>Rabbit</b>
Clonality	<b>Polyclonal</b>
Isotype	<b>IgG</b>
Calculated MW	<b>Predicted: 18 kDa</b>

Application Notes	<b>Observed: 17 kDa KDa</b> <b>UBD antibody can be used for detection of UBD by Western blot at 1 - 2 µg/ml. For immunofluorescence start at 20 µg/mL.</b>
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**UBD Antibody - Additional Information**

Gene ID	<b>10537</b>
<b>Target/Specificity</b>	
UBD; UBD antibody is human specific.	

**Reconstitution & Storage**

UBD antibody can be stored at 4°C for three months and -20°C, stable for up to one year.

**Precautions**

UBD Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

**UBD Antibody - Protein Information**

**Name** UBD

**Synonyms** FAT10

**Function**

Ubiquitin-like protein modifier which can be covalently attached to target protein and subsequently leads to their degradation by the 26S proteasome, in a NUB1-dependent manner. Probably functions as a survival factor. Conjugation ability activated by UBA6. Promotes the expression of the proteasome subunit beta type-9 (PSMB9/LMP2). Regulates TNF-alpha-induced and LPS-mediated activation of the central mediator of innate immunity NF-kappa-B by promoting TNF-alpha-mediated proteasomal degradation of ubiquitinated-I-kappa-B-alpha. Required for TNF-alpha-induced p65 nuclear translocation in renal tubular epithelial cells (RTECs). May be involved in dendritic cell (DC) maturation, the process by which immature dendritic cells differentiate into fully competent antigen-presenting cells that initiate T-cell responses. Mediates mitotic non-disjunction and chromosome instability, in long- term in vitro culture and cancers, by

abbreviating mitotic phase and impairing the kinetochore localization of MAD2L1 during the prometaphase stage of the cell cycle. May be involved in the formation of aggresomes when proteasome is saturated or impaired. Mediates apoptosis in a caspase-dependent manner, especially in renal epithelium and tubular cells during renal diseases such as polycystic kidney disease and Human immunodeficiency virus (HIV)-associated nephropathy (HIVAN).

**Cellular Location**

Nucleus. Cytoplasm. Note=Accumulates in aggresomes under proteasome inhibition conditions

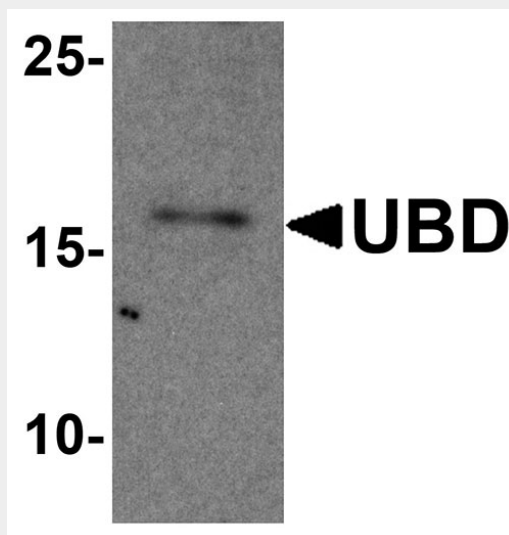
**Tissue Location**

Constitutively expressed in mature dendritic cells and B-cells. Mostly expressed in the reticuloendothelial system (e.g thymus, spleen), the gastrointestinal system, kidney, lung and prostate gland.

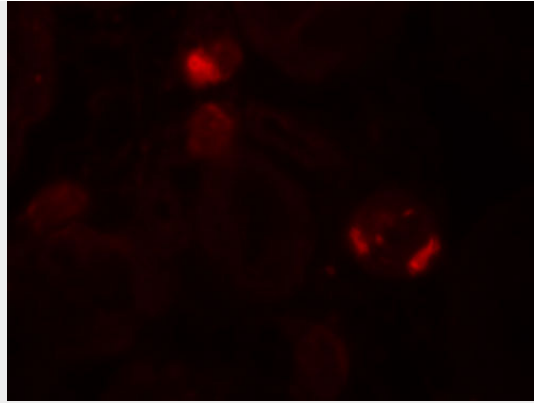
**UBD Antibody - Protocols**

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](#)

**UBD Antibody - Images**

Western blot analysis of UBD in human testis tissue lysate with UBD antibody at 1 µg/ml.



Immunofluorescence of UBD in human testis tissue with UBD antibody at 20 µg/ml.

### **UBD Antibody - Background**

UBD, also designated ubiquitin D or diubiquitin, plays a role in antigen presentation, cytokine response and apoptosis. It is a 165 amino acid protein encoded in the major histocompatibility complex (MHC) that consists of two domains which share significant homology with ubiquitin (1,2). UBD is inducible by interferon gamma and TNF-alpha and regulates TNF-alpha-induced and LPS-mediated activation of the central mediator of innate immunity NF-kappa-B by promoting TNF-alpha-mediated proteasomal degradation of ubiquitinated-I-kappa-B-alpha (3). It may also regulate cell growth during dendritic cell or B cell activation and development (4,5).

### **UBD Antibody - References**

- Ocklenburg F, Moharreggh-Khiabani D, Geffers R, et al. UBD, a downstream element of FOXP3, allows the identification of LGALS3, a new marker of human regulatory T cells. *Lab. Invest.* 2006; 86:724-37.
- Cook WJ, Jeffrey LC, Carson M, et al. Structure of a diubiquitin conjugate and a model for interaction with ubiquitin conjugating enzyme (E2). *J. Biol. Chem.* 1992; 267:16467-71.
- Rahighi S, Ikeda F, Kawasaki M, et al. Specific recognition of linear ubiquitin chains by NEMO is important for NF-kappaB activation. *Cell* 2009;136:1098-109.
- Cort L, Habib M, Eberwine RA, et al. Diubiquitin (Ubd) is a susceptibility gene for virus-triggered autoimmune diabetes in rats. *Genes Immun.* 2014; 15:168-75.