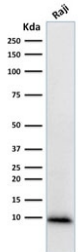
Ubiquitin / UBB Antibody [clone UBB/1748] (V3933)

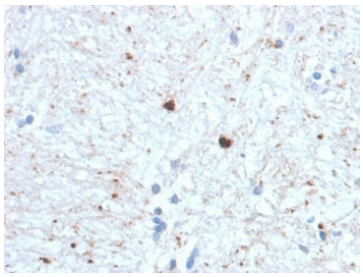
Catalog No.	Formulation	Size
V3933-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3933-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3933SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

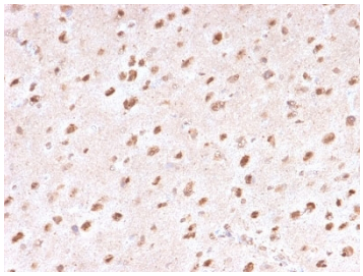
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2c, kappa
Clone Name	UBB/1748
Purity	Protein G affinity chromatography
UniProt	P0CG47, P0CG48, P62979, P62987, P62988
Localization	Cell Surface, cytoplasmic, nuclear
Applications	Flow Cytometry : 1-2ug/10^6 cells Western Blot : 1-2ug/ml Immunofluorescence : 1-2ug/ml Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This Ubiquitin/UBB antibody is available for research use only.



Western blot testing of human Raji cell lysate with Ubiquitin/UBB antibody (clone UBB/1748). Expected molecular weight ~9 kDa.



IHC staining of FFPE human brain with Ubiquitin/UBB antibody (clone UBB/1748). Required HIER: boil tissue sections in 10mM citrate buffer, pH 6, for 10-20 min followed by cooling at RT for 20 min.



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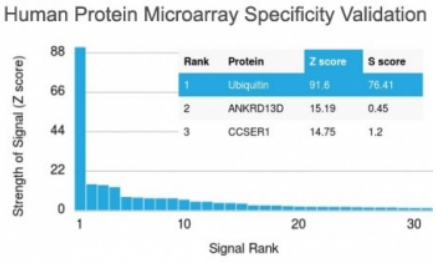
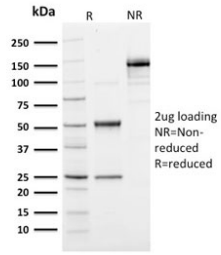
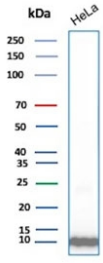


Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using Ubiquitin/UBB antibody (clone UBB/1748). These results demonstrate the foremost specificity of the UBB/1748 mAb.
Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.



SDS-PAGE analysis of purified, BSA-free Ubiquitin antibody (clone UBB/1748) as confirmation of integrity and purity.



Western blot testing of human HeLa cell lysate with Ubiquitin/UBB antibody (clone UBB/1748). Expected molecular weight ~9 kDa.

Description

Ubiquitin antibody recognizes Ubiquitin, a highly conserved regulatory protein encoded in part by the UBB gene and essential for maintaining cellular protein quality control. Ubiquitin is a small 76 amino acid polypeptide that becomes covalently attached to substrate proteins through an ATP dependent enzymatic cascade involving E1 activating enzymes, E2 conjugating enzymes, and E3 ligases. This process, known as ubiquitination, alters the fate, localization, or activity of target proteins and is fundamental to cellular homeostasis.

One of the best characterized functions of Ubiquitin is tagging proteins for degradation by the 26S proteasome. Polyubiquitin chains formed through lysine 48 linkages commonly signal proteasomal degradation, allowing removal of misfolded, damaged, or short lived regulatory proteins. In contrast, lysine 63 linked chains and other linkage types participate in non degradative signaling processes including DNA repair, endocytic trafficking, inflammatory signaling, and cell cycle regulation. Through these distinct chain architectures, Ubiquitin acts as a versatile post translational modifier that influences numerous intracellular pathways.

The UBB gene encodes polyubiquitin precursor proteins that are proteolytically processed to generate functional ubiquitin monomers. Ubiquitin is ubiquitously expressed across tissues due to its central role in proteostasis and cellular regulation. Dysregulation of ubiquitin mediated pathways has been implicated in neurodegenerative disorders characterized by protein aggregation, as well as in cancer, where abnormal degradation of tumor suppressors or stabilization of oncogenic proteins contributes to malignant progression.

Ubiquitin localizes to both the cytoplasm and nucleus, where it modifies substrate proteins involved in transcriptional control, chromatin remodeling, and stress responses. Ubiquitin antibody can detect free ubiquitin as well as ubiquitin conjugated protein species depending on assay conditions. The monoclonal antibody clone UBB/1748 is designed to detect Ubiquitin in research applications investigating proteasome function, cellular stress, protein turnover, and ubiquitin signaling pathways. Clone UBB/1748 supports evaluation of ubiquitin distribution patterns in normal tissues and disease associated contexts.

Application Notes

Optimal dilution of the Ubiquitin/UBB antibody should be determined by the researcher.

Immunogen

A portion of amino acids 1-119 from the human protein was used as the immunogen for the Ubiquitin/UBB antibody.

Storage

Store the Ubiquitin/UBB antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).