Human Ubiquitin/Ubiquitin+1 Antibody

Monoclonal Mouse IgG_{2B} Clone # 83406

Catalog Number: MAB701

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Ubiquitin/Ubiquitin+1 in Western blots..
Source	Monoclonal Mouse IgG_{2B} Clone # 83406
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Human Ubiquitin+1 synthetic peptide SSMQIFVKTLTGKTITLEVEPSDTIENVKAKIQDKEIPPDQQRLIFAGKQ LEDGRTLSDYNIQKESTLHLVLRLRG*YADLREDPDRQDHHPGSGAQ*
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

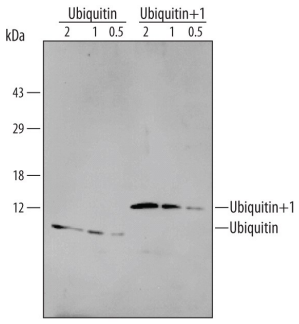
APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	1-2 µg/mL	See Below
Immunohistochemistry	8-25 µg/mL	See Below

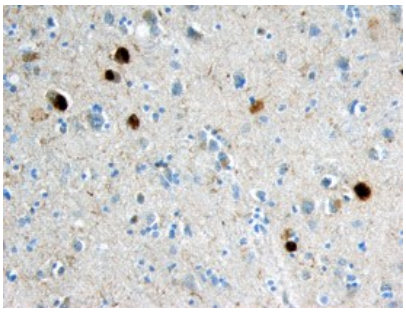
DATA

Western Blot



Detection of Human Ubiquitin/Ubiquitin+1 by Western Blot. Western blot shows samples of Recombinant Human Ubiquitin (Catalog # 701-UB) (2, 1, and 0.5 ng) and Recombinant Human Ubiquitin+1 (Catalog # 703-UB) (2, 1, and 0.5 ng). PVDF membrane was probed with 1-2 µg/mL Mouse Anti-Human Ubiquitin/Ubiquitin+1 Monoclonal Antibody (Catalog # MAB701) followed by HRP-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # HAF007). Specific bands for Ubiquitin and Ubiquitin+1 were detected at approximately 11 kDa and 13 kDa, respectively (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 9.

Immunohistochemistry



Ubiquitin/Ubiquitin+1 in Human Alzheimer's Disease Brain. Ubiquitin/Ubiquitin+1 was detected in immersion fixed paraffin-embedded sections of human Alzheimer's disease brain (cortex) using 25 µg/mL Mouse Anti-Human Ubiquitin/Ubiquitin+1 Monoclonal Antibody (Catalog # MAB701) overnight at 4 °C. Tissue was stained with the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counter-stained with hematoxylin (blue). Specific labeling was localized to the cytoplasm of neurons in the cortex. View our protocol for Chromogenic IHC Staining of Paraffin-embedded Tissue Sections.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Ubiquitin+1 has a carboxyl terminal amino acid sequence that differs from normal Ubiquitin. The different carboxyl terminal sequence appears to result from a frameshift in the Ubiquitin mRNA. The underlying mechanisms creating the mRNA frameshift are not clearly understood. The occurrence of the frameshift that generates Ubiquitin+1 is much more prevalent in patients with Alzheimers Disease or with Down Syndrome than in control individuals who are not afflicted with the disorders. The monoclonal anti-Ubiquitin+1 (Catalog # MAB703) and rabbit polyclonal anti-Ubiquitin+1 (Catalog # AF703) antibodies were raised against the Ubiquitin+1 carboxyl terminal sequence that differs from normal Ubiquitin and are therefore non-reactive with Ubiquitin. Monoclonal anti-Ubiquitin (Catalog # MAB701) detects both Ubiquitin and Ubiquitin+1 indicating that the epitope recognized by this antibody is contained in the portion of the proteins that are identical.

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