# **Product Datasheet**

# Ubiquilin 2 Antibody (6H9) - BSA Free NBP2-25164

Unit Size: 0.1 ml

Store at -20C. Avoid freeze-thaw cycles.

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## NBP2-25164

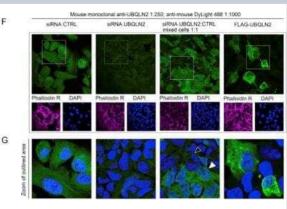
Ubiquilin 2 Antibody (6H9) - BSA Free

Ubiquilin 2 Antibody (6H9) - BSA Free	
Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	6H9
Preservative	5mM Sodium Azide
Isotype	lgG1
Purity	Protein G purified
Buffer	50% PBS, 50% glycerol
Target Molecular Weight	66-68 kDa
Product Description	
Description	Novus Biologicals Knockout (KO) Validated Mouse Ubiquilin 2 Antibody (6H9) - BSA Free (NBP2-25164) is a monoclonal antibody validated for use in IHC, WB, ICC/IF, Simple Western and IP. Anti-Ubiquilin 2 Antibody: Cited in 17 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	29978
Gene Symbol	UBQLN2
Species	Human, Mouse, Rat
Immunogen	Human Ubiquilin 2 expressed in and purified from E. coli [UniProt# Q9UHD9]
Product Application Details	
Applications	Western Blot, Simple Western, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunoprecipitation, Knockdown Validated, Knockout Validated
Recommended Dilutions	Western Blot 1:1000-1:2000, Simple Western 1:100, Immunohistochemistry 1:1000, Immunocytochemistry/ Immunofluorescence 1:1000, Immunoprecipitation, Immunohistochemistry-Frozen, Knockout Validated, Knockdown Validated
Application Notes	This Ubiquilin 2 (6H9). antibody is useful for Immunocytochemistry/Immunofluorescence, Immunohistochemistry, and Western Blot, where a band can be seen at approx. 66-68 kDa.  In Simple Western only 10 - 15 uL of the recommended dilution is used per data point.  See Simple Western Antibody Database for Simple Western validation: Tested in HeLa lysate 0.5 mg/mL, separated by Size, antibody dilution of 1:100, apparent MW was 74 kDa. Use in Immunohistochemistry-Frozen reported in scientific literature (PMID:33028421).



#### **Images**

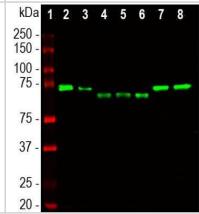
Immunocytochemistry/ Immunofluorescence: Ubiquilin 2 Antibody (6H9) [NBP2-25164] - Validation of UBQLN2 antibody for staining of endogenous UBQLN2 in U2OS cells. U2OS cells were transfected with control siRNA or siRNA targeting UBQLN2. Cells were either seeded as separate groups (i.e., control and UBQLN2 siRNA) or mixed 1:1 and seeded together. Cells were stained using the mouse monoclonal anti-UBQLN2 6H9 (Novus NBP2-25164), at 1:250 in 2% BSA PBS for 1h. Secondary antibody was goat Anti-Mouse DyLight 488. Knockdown of UBQLN2 can be clearly seen to decrease the signal, indicating that the antibody is specific to UBQLN2. (G) displays zoom of the indicated areas in. For the mixed cells a white arrowhead indicates a cell transfected with control siRNA and a black arrowhead a cell transfected with UBQLN2 siRNA. Image collected and cropped by CiteAb from the following publication (https://doi.org/10.1016/j.cell.2016.07.001), licensed under a CC-BY license.



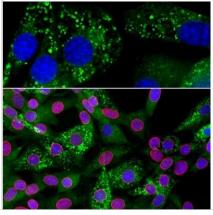
Simple Western: Ubiquilin 2 Antibody (6H9) [NBP2-25164] - Simple Western lane view shows a specific band for Ubiquilin 2 in 0.5 mg/ml of HeLa lysate. This experiment was performed under reducing conditions using the 12-230 kDa separation system.



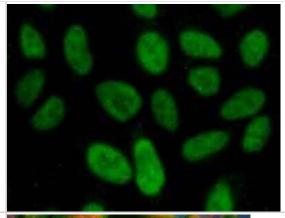
Western Blot: Ubiquilin 2 Antibody (6H9) [NBP2-25164] - Analysis of different tissue and cell lysates using mouse mAb to ubiquilin 2, NBP2-25164, dilution 1:1,000 in green: [1] protein standard (red), [2] NIH-3T3, [3] C6, [4] HEK293, [5] HeLa, [6] SH-SY5Y, [7] rat whole brain, and [8] mouse whole brain. The band at 65-70kDa corresponds to ubiquilin 2 protein, which is known to differ between the human and rodent proteins.



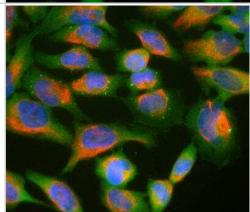
Immunocytochemistry/Immunofluorescence: Ubiquilin 2 Antibody (6H9) [NBP2-25164] - Analysis of an NIH-3T3 cell culture stained with mouse mAb to ubiquilin 2, NBP2-25164, dilution 1:1,000 in green, and costained with chicken pAb to lamin A/C, dilution 1:5,000 in red. The blue is DAPI staining of nuclear DNA. The cells were treated with 50uM of chloroquine, an inhibitor of autophagy, for 16 hours prior to staining. NBP2-25164 antibody reveals vesicular staining of ubiquilin 2 protein accumulated in lysosomes in the cytoplasm, while the lamin A/C antibody stains the nuclear lamina.



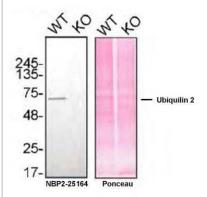
Immunocytochemistry/Immunofluorescence: Ubiquilin 2 Antibody (6H9) [NBP2-25164] - Analysis of Human U2OS cells stained with Ubiquilin 2 antibody. Primary antibody dilution: 1:1000. Image from verified customer review.



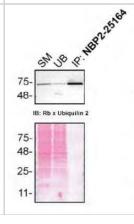
Immunocytochemistry/Immunofluorescence: Ubiquilin 2 Antibody (6H9) [NBP2-25164] - HeLa cell cultures stained with NBP2-25164 (green) and chicken polyclonal antibody to Vimentin: NB300-223 (red). In most individual cells Ubiquilin 2 is present diffusely in the cytoplasm of cells, though some cells show enrichment of the protein in spherical autophagosome-like structure.



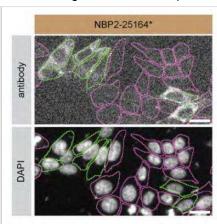
Western Blot: Ubiquilin 2 Antibody (6H9) [NBP2-25164] - Lysates of HAP1 WT and Ubiquilin 2 KO were prepared, and 30 ug of protein were processed for immunoblot with NBP2-25164. The Ponceau stained transfer of the blot is shown. Antibody dilution used: 1/2000. Predicted band size: 65 kDa. Image, protocol and testing courtesy of YCharOS Inc. (ycharos.com).



Immunoprecipitation: Ubiquilin 2 Antibody (6H9) [NBP2-25164] - HAP1 lysates were prepared, and immunoprecipitation was performed using 2.0 ug of Ubiquilin 2 antibody (NBP2-25164) pre-coupled to Dynabeads protein G. Samples were washed and processed for immunoblot with NBP2-25164. For immunoblot, Recombinant Ubiquilin 2 (Rb x Ubiquilin 2) was used at 1/1000. The Ponceau stained transfer of the blot is shown. SM=4% starting material; UB=4% unbound fraction. Image, protocol and testing courtesy of YCharOS Inc. (ycharos.com).



Immunocytochemistry/ Immunofluorescence: Ubiquilin 2 Antibody (6H9) [NBP2-25164] - HAP1 WT and Ubiquilin 2 KO cells were labeled with a green or a far-red fluorescent dye, respectively. WT and KO cells were mixed and plated to a 1:1 ratio in a 96-well plate with glass bottom. Cells were stained with Ubiquilin-2 antibody (NBP2-25164) and with the corresponding Alexa-fluor 555 coupled secondary antibody including DAPI. Acquisition of the blue (nucleus-DAPI), green (identification of WT cells), red (antibody staining) and far-red (identification of KO cells) channels was performed. Representative image of the blue and red (grayscale) channels is shown. WT and KO cells are outlined with green and magenta dashed line, respectively. Antibody dilution used: 1/1000. Bars = 10 um Image, protocol and testing courtesy of YCharOS Inc. (ycharos.com).



#### **Publications**

McDowell, I;Ayoubi, R;Fotouhi, M;Southern, K;McPherson, PS;Laflamme, C;NeuroSGC/YCharOS/EDDU collaborative group, ;ABIF Consortium, ; The identification of high-preforming antibodies for Ubiquilin-2 for use in Western Blot, immunoprecipitation, and immunofluorescence F1000Research 2023-03-30 [PMID: 37359784] (Immunocytochemistry/ Immunofluorescence, Mouse)

Teyssou E, Chartier L, Amador MD et al. Novel UBQLN2 mutations linked to amyotrophic lateral sclerosis and atypical hereditary spastic paraplegia phenotype through defective HSP70-mediated proteolysis Neurobiology of Aging 2017-10-01 [PMID: 28716533] (Immunocytochemistry/ Immunofluorescence, Mouse)

Whiteley AM, Prado MA, de Poot SAH et Al. Global proteomics of Ubqln2-based murine models of ALS J Biol Chem 2020-12-10 [PMID: 33277362] (Western Blot)

Laura R. Nementzik, Kyrah M. Thumbadoo, Helen C. Murray, David Gordon, Shu Yang, Ian P. Blair, Clinton Turner, Richard L. M. Faull, Maurice A. Curtis, Catriona McLean, Garth A. Nicholson, Molly E. V. Swanson, Emma L. Scotter Distribution of ubiquilin 2 and TDP □43 aggregates throughout the CNS in UBQLN2 p. T487I □linked amyotrophic lateral sclerosis and frontotemporal dementia Brain Pathology 2023-12-19 [PMID: 38115557]

Dao TP, Rajendran A, Galagedera SKK et al. Short disordered N-termini & proline-rich domain are major regulators of UBQLN1/2/4 phase separation Biophysical journal 2023-11-30 [PMID: 38041404] (WB)

Dao TP, Rajendran A, Galagedera SKK et al. Short N-terminal disordered regions and the proline-rich domain are major regulators of phase transitions for full-length UBQLN1, UBQLN2 and UBQLN4 bioRxiv: the preprint server for biology 2023-09-29 [PMID: 37808720] (WB)

Mohan HM, Trzeciakiewicz H, Pithadia A et al. RTL8 promotes nuclear localization of UBQLN2 to subnuclear compartments associated with protein quality control Cellular and molecular life sciences: CMLS 2022-03-05 [PMID: 35247097] (ICC/IF, WB, Human)

Nementzik L, Thumbadoo K, Murray H et al. Distribution of ubiquilin 2 and TDP-43 aggregates throughout the CNS inUBQLN2p.T487I-linked amyotrophic lateral sclerosis and frontotemporal dementia bioRxiv 2023-02-10 (IHC, Human)

Buel GR, Chen X, Myint W et al. E6AP AZUL interaction with UBQLN1/2 in cells, condensates, and an AlphaFold-NMR integrated structure Structure (London, England: 1993) 2023-02-14 [PMID: 36827983]

Phung TH, Tatman M, Monteiro MJ UBQLN2 undergoes a reversible temperature-induced conformational switch that regulates binding with HSPA1B: ALS/FTD mutations cripple the switch but do not destroy HSPA1B binding Biochimica et biophysica acta. General subjects 2022-11-21 [PMID: 36423739] (WB, Human)

Lin BC, Phung TH, Higgins NR et al. ALS/FTD mutations in UBQLN2 are linked to mitochondrial dysfunction through loss-of-function in mitochondrial protein import Human molecular genetics 2021-04-22 [PMID: 33891006]

Higgins NR, Greenslade JE, Wu JJ et al. Serpin neuropathology in the P497S UBQLN2 mouse model of ALS/FTD Brain pathology (Zurich, Switzerland) 2021-03-29 [PMID: 33780087] (WB, IF/IHC, Mouse)

More publications at <a href="http://www.novusbio.com/NBP2-25164">http://www.novusbio.com/NBP2-25164</a>





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### **Products Related to NBP2-25164**

HAF007 Goat anti-Mouse IgG Secondary Antibody [HRP]

NB720-B Rabbit anti-Mouse IgG (H+L) Secondary Antibody [Biotin]

NBP1-97005-0.5mg Mouse IgG1 Isotype Control (MG1)

NBP1-85639PEP Ubiquilin 2 Recombinant Protein Antigen

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