

**Ubiquilin1 Antibody (N-term)**  
**Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP2176a****Specification**

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**Ubiquilin1 Antibody (N-term) - Product Information**

Application	WB,E
Primary Accession	<a href="#">Q9UMX0</a>
Other Accession	<a href="#">Q9JJP9</a> , <a href="#">Q8R317</a> , <a href="#">Q8IXS9</a>
Reactivity	Human, Mouse
Predicted	Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	62519
Antigen Region	40-70

**Ubiquilin1 Antibody (N-term) - Additional Information****Gene ID** 29979**Other Names**

Ubiquilin-1, Protein linking IAP with cytoskeleton 1, PLIC-1, hPLIC-1, UBQLN1, DA41, PLIC1

**Target/Specificity**

This Ubiquilin1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 40-70 amino acids from the N-terminal region of human Ubiquilin1.

**Dilution**

WB~~1:1000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

Ubiquilin1 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

**Ubiquilin1 Antibody (N-term) - Protein Information****Name** UBQLN1

**Synonyms** DA41, PLIC1

**Function** Plays an important role in the regulation of different protein degradation mechanisms and pathways including ubiquitin- proteasome system (UPS), autophagy and endoplasmic reticulum-associated protein degradation (ERAD) pathway. Mediates the proteasomal targeting of misfolded or accumulated proteins for degradation by binding (via UBA domain) to their polyubiquitin chains and by interacting (via ubiquitin-like domain) with the subunits of the proteasome (PubMed:[15147878](#)). Plays a role in the ERAD pathway via its interaction with ER-localized proteins UBXN4, VCP and HERPUD1 and may form a link between the polyubiquitinated ERAD substrates and the proteasome (PubMed:[18307982](#), PubMed:[19822669](#)). Involved in the regulation of macroautophagy and autophagosome formation; required for maturation of autophagy-related protein LC3 from the cytosolic form LC3-I to the membrane-bound form LC3-II and may assist in the maturation of autophagosomes to autolysosomes by mediating autophagosome-lysosome fusion (PubMed:[19148225](#), PubMed:[20529957](#), PubMed:[23459205](#)). Negatively regulates the TICAM1/TRIF-dependent toll-like receptor signaling pathway by decreasing the abundance of TICAM1 via the autophagic pathway (PubMed:[21695056](#)). Promotes the ubiquitination and lysosomal degradation of ORAI1, consequently down-regulating the ORAI1-mediated Ca<sup>2+</sup> mobilization (PubMed:[23307288](#)). Suppresses the maturation and proteasomal degradation of amyloid beta A4 protein (A4) by stimulating the lysine 63 (K63)-linked polyubiquitination. Delays the maturation of A4 by sequestering it in the Golgi apparatus and preventing its transport to the cell surface for subsequent processing (By similarity). Ubiquitinates BCL2L10 and thereby stabilizes protein abundance (PubMed:[22233804](#)).

**Cellular Location**

Cytoplasm. Nucleus Endoplasmic reticulum. Cytoplasmic vesicle, autophagosome. Cell membrane Note=Detected in neuronal processes and at synapses (By similarity) Recruited to the ER during ER-associated protein degradation (ERAD) (PubMed:[19822669](#)). Isoform 1 and isoform 3 colocalize with PSEN1 in the cell membrane and in cytoplasmic juxtanuclear structures called aggresomes (PubMed:[21143716](#)). Colocalizes with ORAI1 and TICAM1 in the autophagosome (PubMed:[21695056](#), PubMed:[23307288](#)). Colocalizes with EPS15 and HGS in ubiquitin-rich cytoplasmic aggregates that are not endocytic compartments and with EPS15 also in aggresomes (PubMed:[16159959](#)). {ECO:0000250|UniProtKB:Q9JJP9, ECO:0000269|PubMed:[16159959](#), ECO:0000269|PubMed:[19822669](#), ECO:0000269|PubMed:[21143716](#), ECO:0000269|PubMed:[21695056](#), ECO:0000269|PubMed:[23307288](#)}

**Tissue Location**

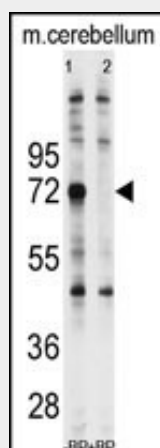
Brain (at protein level) (PubMed:[18953672](#)). Ubiquitous. Highly expressed throughout the brain; detected in neurons and in neuropathological lesions, such as neurofibrillary tangles and Lewy bodies. Highly expressed in heart, placenta, pancreas, lung, liver, skeletal muscle and kidney.

**Ubiquilin1 Antibody (N-term) - Protocols**

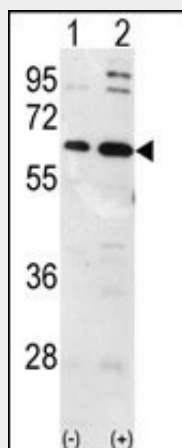
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**Ubiquilin1 Antibody (N-term) - Images**



Western blot analysis of anti-Ubiquilin1 Antibody (N-term) (Cat.#AP2176a) pre-incubated with and without blocking peptide (BP2176a) in Jurkat cell line lysate. Ubiquilin1 (arrow) was detected using the purified Pab.



Western blot analysis of Ubiquilin1 (arrow) using Ubiquilin1 Antibody (N-term) (Cat.#AP2176a). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected with the Ubiquilin1 gene (Lane 2) (Origene Technologies).

### Ubiquilin1 Antibody (N-term) - Background

Ubiquilin 1 (UBQLN1), also known as DA41, was isolated from an adult rat lung cDNA library, and encodes a cellular protein that associates with DAN.1 DAN expression is reduced in rat fibroblast 3Y1 cells transformed with mouse sarcoma virus and in rodent fibroblasts transformed with a variety of oncogenes. The DAN-DA41 interaction is mediated through the N-terminal domain and a cysteine-knot region of DAN. Human DA41 encodes a 589-amino acid protein with 86% amino acid sequence identity with rat protein.2 DA41 expression is regulated in a cell cycle-dependent manner. PLIC1 and PLIC2 (UBQLN2) are homologs of the mouse Plics (proteins linking integrin-associated protein (IAP) and cytoskeleton) and the yeast Dsk2 protein. PLIC1, also called UBQLN1, shares 72% amino acid identity with PLIC2,3 Two motifs are conserved in the mammalian PLICs and yeast Dsk2, an N-terminal ubiquitin-like (UBL) domain and a C-terminal ubiquitin-associated (UBA) domain. Unlike ubiquitin, the UBL domain of the PLICs does not have a diglycine motif in its C terminus. The UBA domain is present in multiple enzyme classes of the ubiquitination machinery. Human PLICs associate with both proteasomes and ubiquitin ligases in large complexes. Overexpression of PLICs impairs the in vivo degradation of 2 unrelated ubiquitin-dependent proteasome substrates, p53 and I-kappa-B-alpha (NFKBIA), but not a ubiquitin-independent substrate. PLICs may link the ubiquitination machinery to the proteasome to affect in vivo protein degradation. The DA41 gene

maps to chromosome 9q21.2-q21.3, a position overlapping a candidate tumor suppressor locus for bladder cancer.<sup>2</sup>

#### **Ubiquilin1 Antibody (N-term) - References**

Massey, L.K., et al., J. Alzheimers Dis. 6(1):79-92 (2004).  
Gao, L., et al., J. Virol. 77(7):4149-4159 (2003).  
Mah, A.L., et al., J. Cell Biol. 151(4):847-862 (2000).  
Kleijnen, M.F., et al., Mol. Cell 6(2):409-419 (2000).  
Hanaoka, E., et al., J. Hum. Genet. 45(3):188-191 (2000).