3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

# Product Information

**Anti-Ubiquilin-1**
produced in rabbit, affinity isolated antibody

Product Number **U7258**

## Product Description

Anti-Ubiquilin-1 is produced in rabbit using as immunogen a synthetic peptide corresponding to a fragment of human ubiquilin-1 (GeneID 29979) conjugated to KLH. This sequence is not found in rat and mouse ubiquilin-1. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-Ubiquilin-1 specifically recognizes human ubiquilin-1 by immunoblotting (~62 kDa). Staining of the ubiquilin-1 band is specifically inhibited by the immunizing peptide.

The ubiquitin-proteasome system (UPS) is involved in the pathogenic mechanisms of several common neurodegenerative diseases.[1] The accumulation of misfolded proteins, induced by oxidative stress or neurotoxin exposure, leads to protein aggregates and inclusion bodies and a consequent loss of cell function and neuronal cell death. Ubiquilin-1 (also known as UBQLN1, Protein-linking IAP to cytoskeleton 1, PLIC-1, DA41, DSK2, XDRP1) is an ubiquitin-like (UBL) protein that has been shown to play a central role in regulating the proteasomal degradation of various proteins including the presenilins PS1 and PS2.[2-4] UBQLN1 contains UBL and ubiquitin-associated (UBA) domains in its N- and C-termini. Several studies indicate that UBQLN1 may play a general role in neurodegenerative diseases. Genetic variants of UBQLN1 have been associated with increased risk of Alzheimer's disease (AD).[5] Down-regulation of UBQLN1 has been reported to modulate PS1 endoproteolysis along with protein levels of nicastrin and PEN-2 and to increase the rate of APP maturation and trafficking through the seceretory pathway leading to increased secretion of sAPP and Aβ.[6] UBQLN1 has been associated with neurofibrillary tangles in AD brain and Lewy bodies in Parkinson's disease (PD).[7] UBQLN1 has been identified as part of polyQ aggregates and in neuronal intranuclear inclusions in a mouse model of Huntington's disease.[8]

## Reagent

Supplied as a solution in 0.01 M PBS, pH 7.4, containing 1% BSA and 15 mM sodium azide as a preservative.

Antibody concentration: ~0.5 mg/mL

## Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

## Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

## Product Profile

Immunoblotting: a working concentration of 0.5–1 μg/mL is recommended using lysates of HEK-293T cells and COS7 cells expressing human ubiquilin-1.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

## References

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VS,KAA,PHC,MAM 03/19-1