

## **PARL Polyclonal Antibody**

Purified Rabbit Polyclonal Antibody (Pab) Catalog # AP58696

#### **Specification**

## **PARL Polyclonal Antibody - Product Information**

Application WB, IHC-P, IHC-F, IF, E

Primary Accession
Reactivity
Rat, Pig, Dog
Host
Clonality
Calculated MW
Rat, Pig, Dog
Rabbit
Polyclonal
42 KDa

Calculated MW 42 KDa Physical State Liquid

Immunogen KLH conjugated synthetic peptide derived

laG

from human PARL

Epitope Specificity 101-200/379

Isotype
Purity
affinity purified by Protein A

Buffer 0.01M TBS (pH7.4) with 1% BSA, 0.02%

Proclin300 and 50% Glycerol.

SUBCELLULAR LOCATION Mitochondrion inner membrane and

**Nucleus. Translocated into the nucleus by** 

an unknown mechanism.

SIMILARITY Belongs to the peptidase S54 family.
Post-translational modifications P-beta is proteolytically processed

(beta-cleavage) in a PARL-dependent manner. The cleavage is inhibited when residues Ser-65, Thr-69 and Ser-70 are all

phosphorylated.

Important Note This product as supplied is intended for

research use only, not for use in human, therapeutic or diagnostic applications.

## **Background Descriptions**

Presenilins associated rhombiod-like protein (PARL) is a mitochondrial intramembrane-cleaving protease belonging to the S54 family of proteins. PARL is involved in intramembrane regulated proteolysis as its catalytic activity involves the cleaving of signaling proteins at intracellular membranes to release active fragments in signal transduction cascades. Using a triad of histidine, serine and asparagine, PARL cleaves type-1 transmembrane domains. PARL is a multi-pass membrane protein localizing to the inner and outer mitochondrial membranes, but it can also be detected in the nucleus following proteolytical processing of P-β. PARL co-localizes with the presenilins PSEN1 and PSEN2, the familial Alzheimer disease products.

# **PARL Polyclonal Antibody - Additional Information**

Gene ID 55486

**Other Names** 



Presenilins-associated rhomboid-like protein, mitochondrial, 3.4.21.105, Mitochondrial intramembrane cleaving protease PARL, P-beta, Pbeta, PARL, PSARL

#### **Dilution**

- <span class ="dilution\_WB">WB~~1:1000</span><br \><span class</pre>
- ="dilution\_IHC-P">IHC-P~~N/A</span><br \><span class
- ="dilution IHC-F">IHC-F~~N/A</span><br \><span class
- ="dilution\_IF">IF $\sim$ 1:50 $\sim$ 200</span><br\><span class ="dilution\_E">E $\sim$ N/A</span>

#### **Storage**

Store at -20  $^{\circ}$ C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4  $^{\circ}$ C.

## **PARL Polyclonal Antibody - Protein Information**

**Name PARL** 

Synonyms PSARL

#### **Function**

Required for the control of apoptosis during postnatal growth. Essential for proteolytic processing of an antiapoptotic form of OPA1 which prevents the release of mitochondrial cytochrome c in response to intrinsic apoptotic signals (By similarity). Required for the maturation of PINK1 into its 52kDa mature form after its cleavage by mitochondrial-processing peptidase (MPP) (PubMed:<a href="http://www.uniprot.org/citations/22354088" target="\_blank">22354088</a>). Promotes cleavage of serine/threonine-protein phosphatase PGAM5 in damaged mitochondria in response to loss of mitochondrial membrane potential (PubMed:<a href="http://www.uniprot.org/citations/22915595" target=" blank">22915595</a>). Mediates

differential cleavage of PINK1 and PGAM5 depending on the health status of mitochondria, disassociating from PINK1 and associating with PGAM5 in response to mitochondrial membrane potential loss (PubMed:<a href="http://www.uniprot.org/citations/22915595" target="\_blank">22915595</a>). Required for processing of CLPB into a form with higher protein disaggregase activity by removing an autoinhibitory N-terminal peptide (PubMed:<a href="http://www.uniprot.org/citations/28288130" target="\_blank">28288130</a>, PubMed:<a href="http://www.uniprot.org/citations/32573439" target="\_blank">32573439</a>). Promotes processing of DIABLO/SMAC in the mitochondrion which is required for DIABLO apoptotic activity (PubMed:<a href="http://www.uniprot.org/citations/28288130" target=" blank">28288130</a>).

href="http://www.uniprot.org/citations/28288130" target="\_blank">28288130</a>). Promotes changes in mitochondria morphology regulated by phosphorylation of P-beta domain (PubMed:<a href="http://www.uniprot.org/citations/14732705" target="\_blank">14732705</a>, PubMed:<a href="http://www.uniprot.org/citations/17116872" target="\_blank">17116872</a>).

#### **Cellular Location**

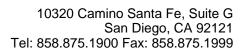
Mitochondrion inner membrane; Multi-pass membrane protein

Also required for cleavage of STARD7 and TTC19 (PubMed:<a

#### **PARL Polyclonal Antibody - Protocols**

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

- Western Blot
- Blocking Peptides
- Dot Blot





• <u>Immunohistochemistry</u>

- <u>Immunofluorescence</u>
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

**PARL Polyclonal Antibody - Images**