

PARL (F-3): sc-514836



The Power to Question

BACKGROUND

Presenilins associated rhomboid-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.

CHROMOSOMAL LOCATION

Genetic locus: PARL (human) mapping to 3q27.1; Parl (mouse) mapping to 16 A3.

SOURCE

PARL (F-3) is a mouse monoclonal antibody raised against amino acids 80-371 (Deletion 204-253) mapping near the C-terminus of PARL of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

PARL (F-3) is available conjugated to agarose (sc-514836 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-514836 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-514836 PE), fluorescein (sc-514836 FITC), Alexa Fluor[®] 488 (sc-514836 AF488), Alexa Fluor[®] 546 (sc-514836 AF546), Alexa Fluor[®] 594 (sc-514836 AF594) or Alexa Fluor[®] 647 (sc-514836 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-514836 AF680) or Alexa Fluor[®] 790 (sc-514836 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

APPLICATIONS

PARL (F-3) is recommended for detection of PARL of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for PARL siRNA (h): sc-61295, PARL siRNA (m): sc-61296, PARL shRNA Plasmid (h): sc-61295-SH, PARL shRNA Plasmid (m): sc-61296-SH, PARL shRNA (h) Lentiviral Particles: sc-61295-V and PARL shRNA (m) Lentiviral Particles: sc-61296-V.

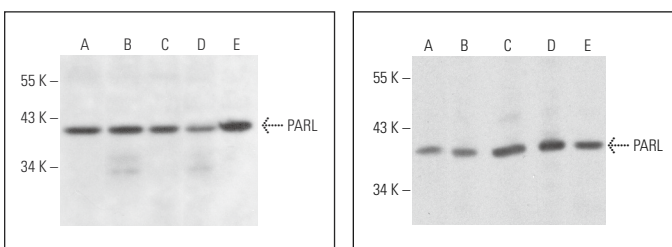
Molecular Weight of PARL: 40 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, A-431 whole cell lysate: sc-2201 or COLO 320DM cell lysate: sc-2226.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



PARL (F-3): sc-514836. Western blot analysis of PARL expression in Jurkat (A), A-431 (B), COLO 320DM (C), MCF7 (D) and NIH/3T3 (E) whole cell lysates.

PARL (F-3): sc-514836. Western blot analysis of PARL expression in A-431 (A), RAW 264.7 (B), Neuro-2A (C), NRK (D) and C6 (E) whole cell lysates.

SELECT PRODUCT CITATIONS

- Khan, I., et al. 2023. Piceatannol promotes neuroprotection by inducing mitophagy and mitobiogenesis in the experimental diabetic peripheral neuropathy and hyperglycemia-induced neurotoxicity. *Int. Immunopharmacol.* 116: 109793.
- Qin, C., et al. 2023. STOML2 restricts mitophagy and increases chemosensitivity in pancreatic cancer through stabilizing PARL-induced PINK1 degradation. *Cell Death Dis.* 14: 191.
- Khan, I., et al. 2024. Activation of SIRT1 by silibinin improved mitochondrial health and alleviated the oxidative damage in experimental diabetic neuropathy and high glucose-mediated neurotoxicity. *Arch. Physiol. Biochem.* 130: 420-436.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

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