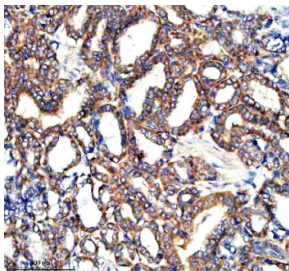


PARP16 Antibody / Poly ADP-ribose polymerase 16 (FY12493)

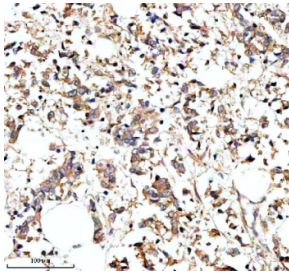
Catalog No.	Formulation	Size
FY12493	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

[Bulk quote request](#)

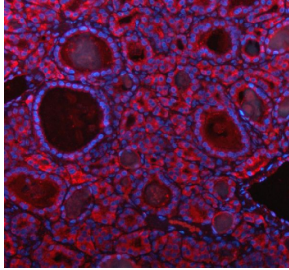
Availability	1-2 days
Species Reactivity	Human
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
UniProt	Q8N5Y8
Localization	Cytoplasm (ER)
Applications	Immunohistochemistry : 2-5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This PARP16 antibody is available for research use only.



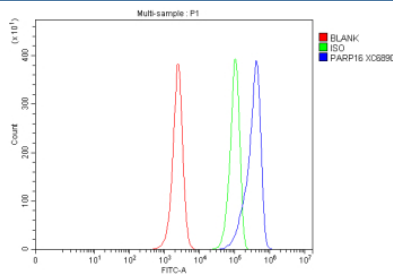
Immunohistochemical staining of PARP16 using anti-PARP16 antibody. PARP16 was detected in a paraffin-embedded section of human thyroid cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-PARP16 antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Immunohistochemical staining of PARP16 using anti-PARP16 antibody. PARP16 was detected in a paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-PARP16 antibody overnight at 4oC. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37oC. The tissue section was developed using an HRP secondary and DAB substrate.



Immunofluorescent staining of PARP16 using anti-PARP16 antibody (red). PARP16 was detected in a paraffin-embedded section of human thyroid cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5 ug/ml rabbit anti-PARP16 antibody overnight at 4oC. Cy3 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:500 dilution and incubated for 30 minutes at 37oC. The section was counterstained with DAPI nuclear stain (blue). Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of HL-60 cells using anti-PARP16 antibody. Overlay histogram showing HL-60 cells stained with (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-PARP16 antibody (1 ug/million cells) for 30 min at 20oC. DyLight 488 conjugated goat anti-rabbit IgG (5-10 ug/million cells) was used as secondary antibody for 30 minutes at 20oC. Isotype control antibody (Green line) was rabbit IgG (1 ug/million cells) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Description

PARP16 antibody detects Poly(ADP-ribose) polymerase 16, a membrane-associated mono-ADP-ribosyltransferase that regulates the unfolded protein response (UPR) and endoplasmic reticulum (ER) stress signaling. PARP16 belongs to the PARP family of enzymes involved in ADP-ribosylation, a post-translational modification that controls protein stability and signaling. The PARP16 antibody is commonly used in studies of ER stress, apoptosis, and ADP-ribosylation-dependent signaling pathways.

PARP16 is encoded by the PARP16 gene located on human chromosome 15q21.2. The protein is approximately 38 kilodaltons and uniquely localized to the ER membrane, where it functions as a tail-anchored enzyme with its catalytic domain facing the cytoplasm. Unlike canonical PARPs that catalyze poly(ADP-ribosylation), PARP16 primarily transfers single ADP-ribose moieties to substrate proteins (mono-ADP-ribosylation). This modification modulates the activity of key ER stress sensors, including PERK and IRE1-alpha, enhancing their signaling output during the UPR.

The PARP16 antibody typically detects a 38 kilodalton protein by western blot, and immunofluorescence confirms its ER localization. Functional studies demonstrate that PARP16 activity is induced upon ER stress caused by misfolded protein accumulation or chemical perturbation. Activated PARP16 promotes phosphorylation and activation of PERK and IRE1-alpha, leading to downstream transcriptional responses that restore proteostasis. Inhibition or depletion of PARP16 compromises the UPR, resulting in increased sensitivity to ER stress and enhanced apoptosis.

Beyond its role in ER stress regulation, PARP16 contributes to cancer cell survival and resistance to chemotherapeutic agents that induce proteotoxic stress. Overexpression has been reported in hepatocellular carcinoma, breast cancer, and melanoma, where it supports adaptive stress signaling. Conversely, loss of PARP16 sensitizes cells to stress-induced death, making it a potential therapeutic target. NSJ Bioreagents provides a validated PARP16 antibody optimized for immunofluorescence, immunohistochemistry and flow cytometry assays, enabling precise study of ADP-ribosylation

mechanisms and ER homeostasis.

Application Notes

Optimal dilution of the PARP16 antibody should be determined by the researcher.

Immunogen

E.coli-derived human PARP16 recombinant protein (Position: A9-Y254) was used as the immunogen for the PARP16 antibody.

Storage

After reconstitution, the PARP16 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.