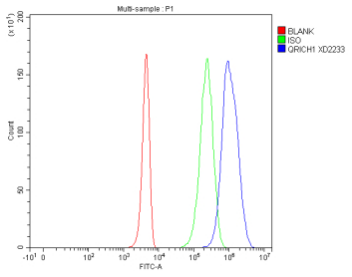
QRICH1 Antibody / Glutamine-rich protein 1 (FY12480)

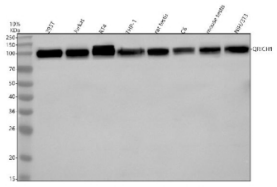
Catalog No.	Formulation	Size
FY12480	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
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 Na2HPO4.
UniProt	Q2TAL8
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This QRICH1 antibody is available for research use only.



Flow Cytometry analysis of 293T cells using anti-QRICH1 antibody. Overlay histogram showing 293T 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-QRICH1 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.



Western blot analysis of QRICH1 using anti-QRICH1 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: human 293T whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: human RT4 whole cell lysates, Lane 4: human THP-1 whole cell lysates, Lane 5: rat testis tissue lysates, Lane 6: rat C6 whole cell lysates, Lane 7: mouse testis tissue lysates, Lane 8: mouse NIH/3T3 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-QRICH1 antibody at 0.5 ug/ml overnight at 4oC, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal was developed using an ECL Plus Western Blotting Substrate. QRICH1 (~86 kDa predicted) was detected at ~100 kDa, consistent with reports showing anomalous migration of the glutamine-rich protein and the presence of multiple phosphorylation sites.

Description

QRICH1 antibody recognizes Glutamine-rich protein 1, a stress-responsive transcriptional regulator involved in the unfolded protein response, apoptosis, and cell differentiation. QRICH1 serves as a key mediator of endoplasmic reticulum (ER) stress adaptation by modulating gene expression in response to misfolded protein accumulation. The QRICH1 antibody is widely used in studies of ER stress signaling, apoptosis regulation, and differentiation processes that depend on transcriptional stress sensors.

QRICH1 is encoded by the QRICH1 gene located on human chromosome 3q13.33. The protein is approximately 71 kilodaltons and characterized by an N-terminal glutamine-rich region that supports transcriptional activation and protein-protein interactions. QRICH1 functions downstream of the PERK-eIF2-alpha pathway during the integrated stress response. Under ER stress, phosphorylation of eIF2-alpha suppresses general translation but selectively promotes QRICH1 translation, leading to activation of genes involved in protein folding, lipid metabolism, and apoptosis suppression.

The QRICH1 antibody enables detection of the protein by western blot, where it typically appears as a band around 86-100 kilodaltons. Immunofluorescence and confocal microscopy reveal predominant nuclear localization, consistent with its role as a transcriptional regulator. QRICH1 cooperates with transcriptional coactivators to regulate stress-responsive promoters and contributes to reprogramming during differentiation of osteoblasts, neurons, and epithelial cells. Knockdown experiments demonstrate that QRICH1 deficiency enhances sensitivity to ER stress-induced apoptosis, whereas overexpression supports cell survival by restoring proteostasis.

Recent studies link QRICH1 to human skeletal dysplasia, where loss-of-function mutations impair osteoblast differentiation and bone matrix formation. Additionally, QRICH1 modulates lipid homeostasis and is involved in metabolic regulation under nutrient stress. It may also influence viral infection responses through control of translation reinitiation. NSJ Bioreagents provides a validated QRICH1 antibody optimized for western blot and flow cytometry, supporting investigations into transcriptional stress regulation, ER stress response, and cell differentiation mechanisms.

Application Notes

Optimal dilution of the QRICH1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human QRICH1 recombinant protein (Position: K369-D707) was used as the immunogen for the QRICH1 antibody.

Storage

After reconstitution, the QRICH1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at

-20oC. Avoid repeated freezing and thawing.