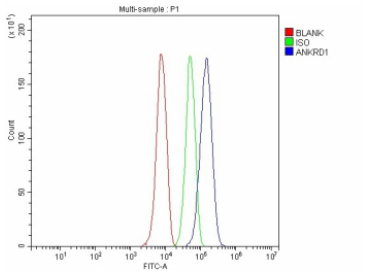
ANKRD1 Antibody / Ankyrin repeat domain-containing protein 1 (FY12060)

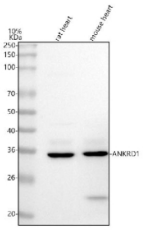
Catalog No.	Formulation	Size
FY12060	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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	Q15327
Applications	Western Blot: 0.25-0.5ug/ml ELISA: 0.1-0.5ug/ml
Limitations	This ANKRD1 antibody is available for research use only.



Flow Cytometry analysis of HepG2 cells using anti-ANKRD1 antibody. Overlay histogram showing HepG2 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-ANKRD1 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 ANKRD1 using anti-ANKRD1 antibody. Lane 1: rat heart tissue lysates, Lane 2: mouse heart tissue 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-ANKRD1 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 enhanced chemiluminescent. A specific band was detected for ANKRD1 at approximately 36 kDa. The expected band size for ANKRD1 is at 36 kDa.

Description

ANKRD1 antibody detects Ankyrin repeat domain-containing protein 1, encoded by the ANKRD1 gene. Ankyrin repeat domain-containing protein 1 is a transcriptional cofactor and stress-responsive protein that contributes to cardiac muscle biology, mechanical signaling, and gene regulation. ANKRD1 antibody provides researchers with a highly specific reagent for studying cardiomyocyte adaptation, hypertrophy, and muscle stress responses.

Ankyrin repeat domain-containing protein 1 belongs to the CARP (cardiac ankyrin repeat protein) family. Research using ANKRD1 antibody has shown that it is predominantly expressed in heart and skeletal muscle, where it localizes to the sarcomere, especially the I-band. Its ankyrin repeat domains allow it to interact with titin, myopalladin, and transcriptional regulators, linking mechanical stretch sensing to gene expression programs. This dual localization to sarcomeres and nuclei makes it an important signaling intermediary.

Studies with ANKRD1 antibody have revealed that its expression is induced by hypertrophic stress, hypoxia, and injury. In cardiomyocytes, ANKRD1 acts as both a structural stabilizer and a regulator of stress-induced transcriptional pathways. Elevated expression has been observed in dilated and hypertrophic cardiomyopathy, suggesting its potential role as a biomarker of heart disease.

Dysregulation of ANKRD1 has also been associated with muscular disorders and cancer. Research using ANKRD1 antibody has demonstrated that mutations in ANKRD1 contribute to congenital cardiomyopathy, while altered expression in tumors influences cell proliferation and invasion. Its pleiotropic functions in muscle and non-muscle tissues highlight its importance across biology.

ANKRD1 antibody is widely applied in western blotting, immunohistochemistry, and immunofluorescence. Western blotting quantifies expression in cardiac and skeletal tissue, immunohistochemistry highlights localization in diseased myocardium, and immunofluorescence demonstrates sarcomeric localization in cardiomyocytes. These methods make ANKRD1 antibody indispensable for cardiac biology research.

By supplying validated ANKRD1 antibody reagents, NSJ Bioreagents supports studies into sarcomere biology, transcriptional regulation, and disease. Detection of Ankyrin repeat domain-containing protein 1 provides researchers with insight into how cardiomyocytes adapt to stress and maintain function.

Application Notes

Optimal dilution of the ANKRD1 antibody should be determined by the researcher.

Immunogen

E.coli-derived human ANKRD1 recombinant protein (Position: D120-F319) was used as the immunogen for the ANKRD1 antibody.

Storage

After reconstitution, the ANKRD1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at

-20oC. Avoid repeated freezing and thawing.

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