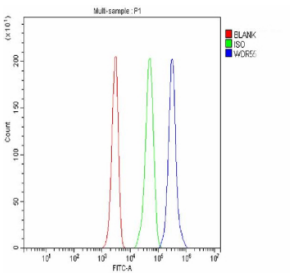
WDR55 Antibody / WD repeat-containing protein 55 (FY13159)

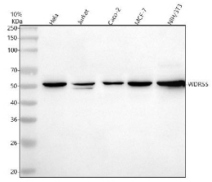
Catalog No.	Formulation	Size
FY13159	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse
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	Q9H6Y2
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This WDR55 antibody is available for research use only.



Flow Cytometry analysis of JK cells using anti-WDR55 antibody. Overlay histogram showing JK 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-WDR55 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 WDR55 using anti-WDR55 antibody. Lane 1: human Hela whole cell lysates, Lane 2: human Jurkat whole cell lysates, Lane 3: human Caco-2 whole cell lysates, Lane 4: human MCF-7 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-WDR55 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. WDR55 antibody detects a single band at ~50 kDa across the indicated samples. Although the theoretical mass is ~42 kDa, WD-repeat nucleolar proteins commonly migrate slower due to sequence composition and phosphorylation.

Description

WDR55 antibody detects WD repeat-containing protein 55, a nucleolar protein essential for ribosome biogenesis and cell proliferation. The UniProt recommended name is WD repeat-containing protein 55 (WDR55). This protein participates in the maturation of 18S ribosomal RNA and assembly of the small ribosomal subunit, contributing to efficient protein synthesis and cell growth.

Functionally, WDR55 antibody identifies a 365-amino-acid protein that localizes to the nucleolus, where it interacts with components of the small subunit (SSU) processome. WDR55's WD-repeat domains form beta-propeller structures that scaffold RNA processing enzymes and ribonucleoprotein complexes necessary for pre-rRNA cleavage and modification.

The WDR55 gene is located on chromosome 2q23.3 and is expressed in actively dividing tissues, including testis, thymus, and embryonic stem cells. By regulating ribosome biogenesis, WDR55 supports developmental processes requiring high translational output and cell proliferation.

Pathologically, loss of WDR55 function disrupts rRNA processing and nucleolar organization, leading to developmental delay, craniofacial abnormalities, and immunodeficiency (as seen in North American Indian childhood cirrhosis-like syndromes). Research using WDR55 antibody supports studies in ribosome assembly, RNA biology, and developmental genetics.

WDR55 antibody is validated for western blotting, immunofluorescence, and immunohistochemistry to detect nucleolar proteins and ribosome assembly factors. NSJ Bioreagents provides WDR55 antibody reagents optimized for studies in RNA metabolism, cell cycle regulation, and nucleolar dynamics.

Structurally, WD repeat-containing protein 55 contains multiple WD repeats forming a propeller-like fold that mediates stable RNA-protein interactions. This antibody enables investigation of WDR55's role in ribosome biogenesis and nucleolar organization.

Application Notes

Optimal dilution of the WDR55 antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human WDR55 was used as the immunogen for the WDR55 antibody.

Storage

After reconstitution, the WDR55 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.