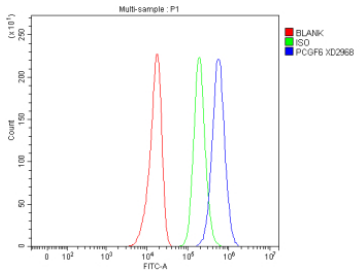
PCGF6 Antibody / Polycomb group RING finger protein 6 (FY12771)

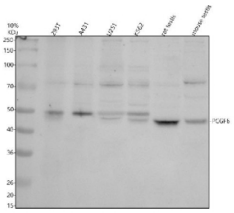
Catalog No.	Formulation	Size
FY12771	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

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	Q9BYE7
Applications	Western Blot : 0.25-0.5ug/ml Flow Cytometry : 1-3ug/million cells
Limitations	This PCGF6 antibody is available for research use only.



Flow Cytometry analysis of U251 cells using anti-PCGF6 antibody. Overlay histogram showing U251 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-PCGF6 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 PCGF6 using anti-PCGF6 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 whole cell lysates, Lane 3: human U251 whole cell lysates, Lane 4: human K562 whole cell lysates, Lane 5: rat testis tissue lysates, Lane 6: mouse testis 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-PCGF6 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. Major bands are detected at ~50 kDa in human and ~45 kDa in mouse and rat samples, consistent with post-translationally modified forms of PCGF6 (predicted ~39 kDa). A faint higher band above 70 kDa likely represents Polycomb complexâ€“associated species.

Description

PCGF6 antibody detects Polycomb group RING finger protein 6, a transcriptional repressor that functions as part of noncanonical Polycomb repressive complex 1.6 (PRC1.6). Encoded by the PCGF6 gene on chromosome 10p15.3, this protein belongs to the Polycomb group (PcG) family, which maintains transcriptional repression of developmental and cell cycle genes through histone modification and chromatin compaction. PCGF6 acts as a key scaffold within PRC1.6, recruiting additional subunits including L3MBTL2, RING1A/B, and E2F6, to mediate histone H2A monoubiquitination and gene silencing independent of canonical PRC1 complexes.

PCGF6 contains a RING finger domain responsible for interacting with the ubiquitin ligases RING1A/B, promoting histone modification that represses gene transcription. Through association with the transcriptional repressors E2F6 and MGA, PCGF6 regulates genes involved in cell proliferation, germline maintenance, and differentiation. It is expressed in embryonic stem cells, germ cells, and certain somatic tissues, where it contributes to pluripotency and developmental gene silencing. PCGF6 activity ensures appropriate repression of lineage-specific genes during embryogenesis and germ cell development.

The PCGF6 antibody is used in epigenetics, developmental biology, and transcriptional regulation studies to investigate Polycomb complex function and chromatin remodeling. Western blot analysis detects a 37 kilodalton band corresponding to PCGF6, and immunofluorescence reveals nuclear punctate staining associated with chromatin regions. This antibody enables researchers to track PRC1.6 distribution and assess its role in transcriptional repression and stem cell identity.

Aberrant expression of PCGF6 has been implicated in cancer and developmental disorders. Overexpression supports cell proliferation and transformation, while depletion can impair germ cell specification and induce differentiation. By regulating histone ubiquitination and chromatin architecture, PCGF6 acts as a molecular link between epigenetic control and transcriptional silencing. The PCGF6 antibody provides a dependable tool for studying these mechanisms in both stem cell and cancer research. NSJ Bioreagents provides this antibody validated for its applications, ensuring consistent detection of Polycomb-associated pathways.

Application Notes

Optimal dilution of the PCGF6 antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence at the C-terminus of human PCGF6 was used as the immunogen for the PCGF6 antibody.

Storage

After reconstitution, the PCGF6 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at

-20oC. Avoid repeated freezing and thawing.