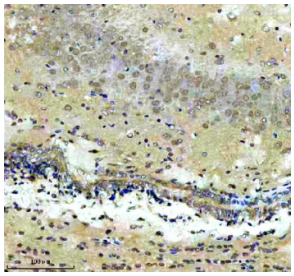
CXXC5 Antibody / CXXC-type zinc finger protein 5 (FY12478)

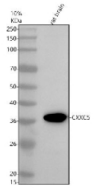
Catalog No.	Formulation	Size
FY12478	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

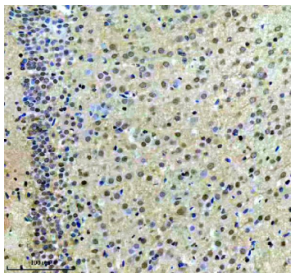
Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	Q7LFL8
Localization	Nuclear, cytoplasmic
Applications	Western Blot: 0.25-0.5ug/ml Immunohistochemistry: 2-5ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This CXXC5 antibody is available for research use only.



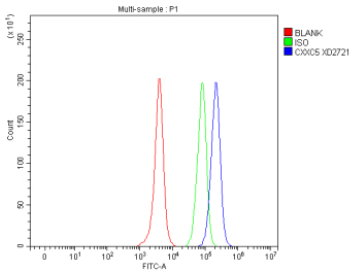
Immunohistochemical staining of CXXC5 using anti-CXXC5 antibody. CXXC5 was detected in a paraffin-embedded section of mouse brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-CXXC5 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.



Western blot analysis of CXXC5 using anti-CXXC5 antibody. Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: rat brain 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-CXXC5 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. CXXC5 (~33 kDa predicted) was detected at ~38 kDa, consistent with published reports of endogenous CXXC5 migration and with known post-translational modification of CXXC5 that can increase apparent molecular weight.



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Flow Cytometry analysis of SH-SY5Y cells using anti-CXXC5 antibody. Overlay histogram showing SH-SY5Y 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-CXXC5 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

CXXC5 antibody recognizes CXXC-type zinc finger protein 5, a nuclear and cytoplasmic signaling regulator that serves as a negative feedback modulator of the Wnt/beta-catenin pathway. CXXC5 belongs to the CXXC-type zinc finger family, whose members bind unmethylated CpG DNA and influence transcriptional regulation, epigenetic programming, and signal transduction. The CXXC5 antibody is commonly used in developmental biology, cancer, and neurobiology studies to analyze its role in cell differentiation, tissue regeneration, and signal modulation.

CXXC5 is encoded by the CXXC5 gene located on human chromosome 5q31.2. The protein contains a CXXC-type zinc finger motif enabling DNA interaction, and a Dishevelled (DVL)-binding domain that directly inhibits Wnt signaling by preventing DVL-mediated beta-catenin stabilization. This feedback inhibition is essential for maintaining balanced Wnt activity during embryogenesis and adult tissue homeostasis. CXXC5 also acts as a transcriptional co-regulator by associating with DNA methylation machinery, including TET family enzymes, to maintain epigenetic stability.

Using the CXXC5 antibody, researchers can detect a 34-38 kilodalton protein by western blot and identify nuclear and cytoplasmic localization through immunofluorescence microscopy. CXXC5 expression is found in osteoblasts, endothelial cells, neurons, and fibroblasts, where it coordinates growth factor signaling and differentiation. In bone metabolism, CXXC5 inhibits osteoblast differentiation by suppressing Wnt signaling, while in the vascular system it regulates angiogenic responses. Its dysregulation contributes to conditions such as osteoporosis, impaired wound healing, and tumorigenesis.

Functionally, CXXC5 participates in feedback loops linking Wnt, bone morphogenetic protein, and transforming growth

factor beta signaling pathways. It also affects neuronal growth cone development and synaptic plasticity. Recent studies suggest that pharmacologic disruption of the CXXC5-DVL interaction can enhance regenerative responses, including hair follicle regeneration and wound repair. NSJ Bioreagents provides a validated CXXC5 antibody optimized for western blot, immunofluorescence, and chromatin immunoprecipitation, supporting comprehensive analysis of Wnt pathway regulation, epigenetic balance, and tissue regeneration mechanisms.

Application Notes

Optimal dilution of the CXXC5 antibody should be determined by the researcher.

Immunogen

A synthetic peptide corresponding to a sequence in the middle region of human CXXC5 was used as the immunogen for the CXXC5 antibody.

Storage

After reconstitution, the CXXC5 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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