



Product Type: Recombinant Chimeric Antibody, primary antibodies

Species reactivity: Human, Mouse, Rat, Cynomolgus monkey, Pig

Applications: IHC-Fr, IHC-P, WB

Molecular Wt: Predicted band size: 41 kDa

Clone number: JJ0959

Description: Neuronal migration protein doublecortin, also known as doublin or lissencephalin-X is a protein that in humans is encoded by the DCX gene. Doublecortin (DCX) is a microtubule-associated protein expressed by neuronal precursor cells and immature neurons in embryonic and adult cortical structures. Neuronal precursor cells begin to express DCX while actively dividing, and their neuronal daughter cells continue to express DCX for 2–3 weeks as the cells mature into neurons. Downregulation of DCX begins after 2 weeks, and occurs at the same time that these cells begin to express NeuN, a neuronal marker.

Immunogen: Synthetic peptide within Human Doublecortin aa 22-71 / 365.

Positive control: Mouse hippocampus tissue, rat hippocampus tissue, SH-SY5Y cell lysate, Mouse brain (P0) tissue lysate.

Subcellular location: Cytoplasm, Cell projection, neuron projection.

Database links: SwissProt: O43602 Human | O88809 Mouse | Q9ESI7 Rat

Recommended Dilutions:

IHC-Fr 1:500

IHC-P 1:500

WB 1:5,000

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

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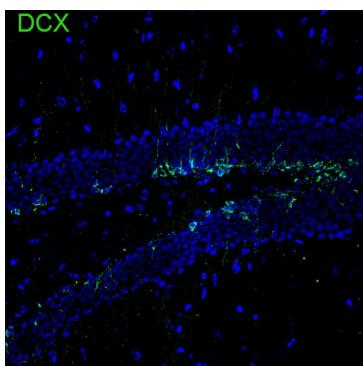
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Images

**Fig1:** Application: IHC-Fr

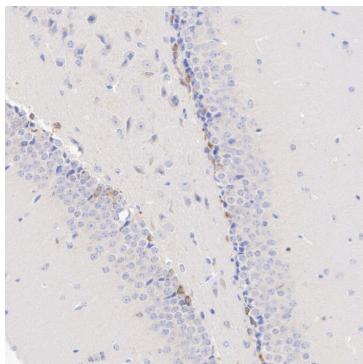
Species: Mouse

Site: Hippocampus

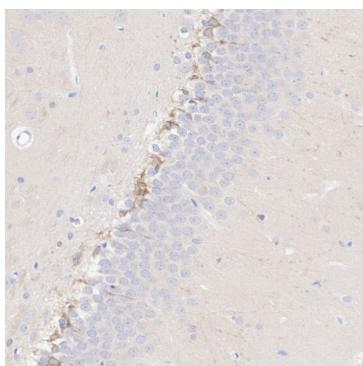
Sample: Frozen section

Antibody concentration: 1:500

Antigen retrieval: Not required

**Fig2:** Immunohistochemical analysis of paraffin-embedded mouse hippocampus tissue with Rat anti-Doublecortin antibody (HA610238) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA610238) at 1/500 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

**Fig3:** Immunohistochemical analysis of paraffin-embedded rat hippocampus tissue with Rat anti-Doublecortin antibody (HA610238) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH₂O and PBS, and then probed with the primary antibody (HA610238) at 1/500 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

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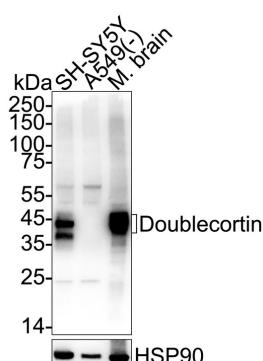
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Fig4: Western blot analysis of Doublecortin on different lysates with Rat anti-Doublecortin antibody (HA610238) at 1/5,000 dilution.



Lane 1: SH-SY5Y cell lysate
 Lane 2: A549 cell lysate (negative)
 Lane 3: Mouse brain (P0) tissue lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 41 kDa
 Observed band size: 41/45 kDa

Exposure time: 2 seconds; ECL: K1801;
 4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA610238) at 1/5,000 dilution was used in primary antibody dilution (K1803) at 4°C overnight. Goat Anti-Rat IgG H&L - HRP Secondary Antibody (HA1023) at 1/5,000 dilution was used for 1 hour at room temperature.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Fu X et al. Doublecortin and JIP3 are neural-specific counteracting regulators of dynein-mediated retrograde trafficking. *Elife*. 2022 Dec
2. Li YN et al. Doublecortin-Expressing Neurons in Human Cerebral Cortex Layer II and Amygdala from Infancy to 100 Years Old. *Mol Neurobiol*. 2023 Jun

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