Anti-Doublecortin Antibody [JJ0959]

ET1701-98

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat, Cynomolgus monkey, Pig
Applications:	WB, IHC-P, IHC-Fr, IF-Tissue
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: Neuro-2a cell lysate, human brain tissue lysate, mouse brain tissue lysate, rat brain tissue lysate, HepG2.

Subcellular location: Cytoplasm, Cell projection, neuron projection.

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

Recommended Dilutions:

WB	1:1,000-1:5,000
IHC-P	1:1,000
IHC-Fr	1:500
IF-Tissue	1:200-1:500

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃ or -80℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

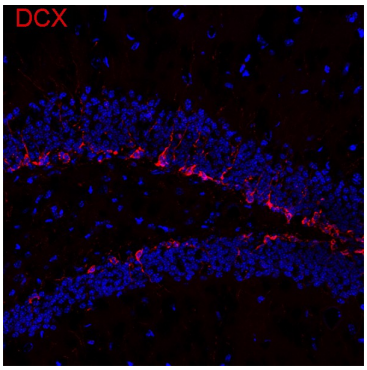

Fig1: Application: IHC-Fr

Species: Mouse

Site: Hippocampus

Sample: Frozen section

Antibody concentration: 1:500

Antigen retrieval: Not required

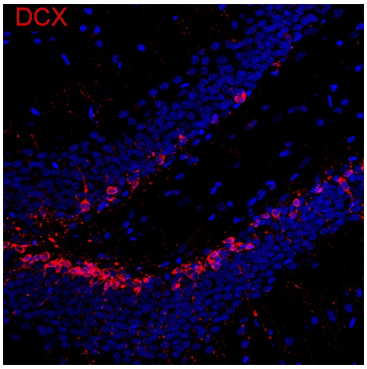

Fig2: Application: IHC-Fr

Species: Rat

Site: Hippocampus

Sample: Frozen section

Antibody concentration: 1:500

Antigen retrieval: Not required

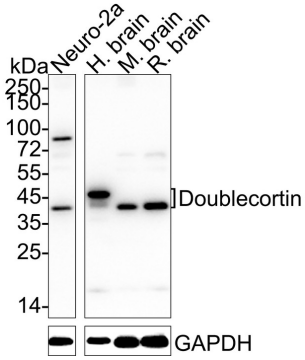

Fig3: Western blot analysis of Doublecortin on different lysates with Rabbit anti-Doublecortin antibody (ET1701-98) at 1/1,000 dilution.

Lane 1: Neuro-2a cell lysate (20 µg/Lane)
Lane 2: Human brain tissue lysate (40 µg/Lane)
Lane 3: Mouse brain tissue lysate (40 µg/Lane)
Lane 4: Rat brain tissue lysate (40 µg/Lane)

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

Exposure time: 1 minute; 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 (ET1701-98) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

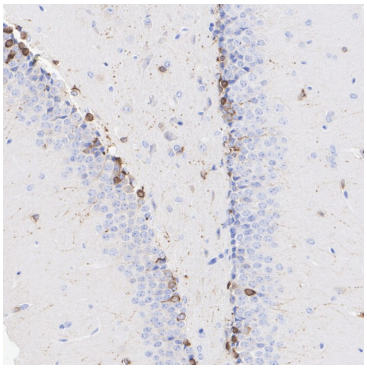

Fig4: Immunohistochemical analysis of paraffin-embedded mouse hippocampus tissue with Rabbit anti-Doublecortin antibody (ET1701-98) at 1/1,000 dilution.

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 ddH_2O and PBS, and then probed with the primary antibody (ET1701-98) at 1/1,000 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.

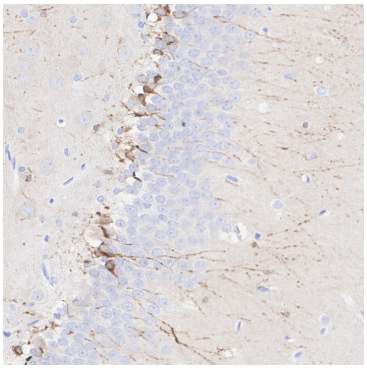

Fig5: Immunohistochemical analysis of paraffin-embedded rat hippocampus tissue with Rabbit anti-Doublecortin antibody (ET1701-98) at 1/1,000 dilution.

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 ddH_2O and PBS, and then probed with the primary antibody (ET1701-98) at 1/1,000 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.

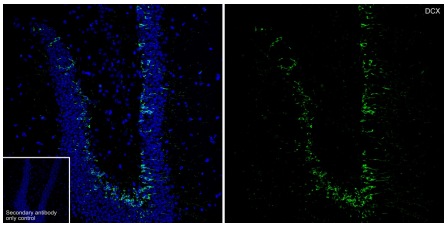

Fig6: Application: IF-Tissue

Species: Mouse

Site: Hippocampus

Sample: Paraffin-embedded section

Antibody concentration: 1/500

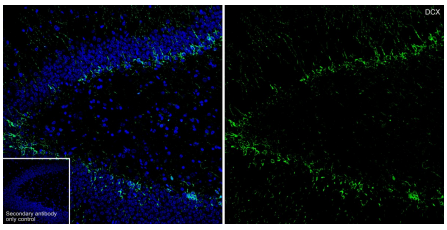

Fig7: Application: IF-Tissue

Species: Rat

Site: Hippocampus

Sample: Paraffin-embedded section

Antibody concentration: 1/500

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