Anti-APP/β-Amyloid Antibody [JE30-54]

HA722139

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	WB, IHC-P, IF-Tissue, IHC-Fr
Molecular Wt:	Predicted band size: 87 kDa
Clone number:	JE30-54

Description: Amyloid-beta precursor protein (APP) is an integral membrane protein expressed in many tissues and concentrated in the synapses of neurons. It functions as a cell surface receptor and has been implicated as a regulator of synapse formation, neural plasticity, antimicrobial activity, and iron export. It is coded for by the gene APP and regulated by substrate presentation. APP is best known as the precursor molecule whose proteolysis generates amyloid beta (Aβ), a polypeptide containing 37 to 49 amino acid residues, whose amyloid fibrillar form is the primary component of amyloid plaques found in the brains of Alzheimer's disease patients.

Immunogen: Recombinant protein within Human Amyloid Precursor Protein aa 671-770 / 770.

Positive control: PC-3 cell lysate, mouse brain tissue lysate, rat brain tissue lysate, human brain tissue, mouse brain tissue, rat brain tissue, mouse cerebral cortex tissue.

Subcellular location: Cell membrane, Membrane, Perikaryon, Cell projection, growth cone, clathrin-coated pit, Early endosome, Cytoplasmic vesicle.

Database links: SwissProt: P05067 Human | P12023 Mouse | P08592 Rat

Recommended Dilutions:

WB	1:1,000
IHC-P	1:1,000
IF-Tissue	1:200
IHC-Fr	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℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

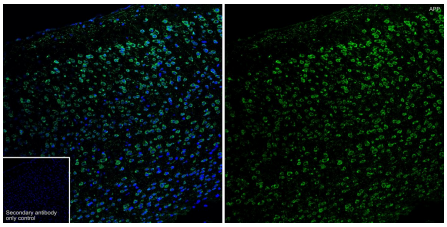

Fig1: Immunofluorescence analysis of frozen mouse cerebral cortex tissue with Rabbit anti-APP/β-Amyloid antibody (HA722139) at 1/500 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for about 2 minutes in microwave oven. The tissues were blocked in 10% negative goat serum for 1 hour at room temperature, washed with PBS, and then probed with the primary antibody (HA722139, green) at 1/500 dilution overnight at 4 ℃, washed with PBS. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. Nuclei were counterstained with DAPI (blue).

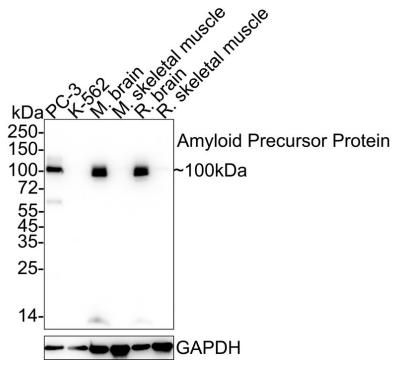

Fig2: Western blot analysis of APP/β-Amyloid on different lysates with Rabbit anti-APP/β-Amyloid antibody (HA722139) at 1/1,000 dilution.

Lane 1: PC-3 cell lysate
Lane 2: K-562 cell lysate (negative)
Lane 3: Mouse brain tissue lysate
Lane 4: Mouse skeletal muscle tissue lysate (negative)
Lane 5: Rat brain tissue lysate
Lane 6: Rat skeletal muscle tissue lysate (negative)

Lysates/proteins at 20 µg/Lane.

Predicted band size: 87 kDa
Observed band size: 100 kDa

Exposure time: 20 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 (HA722139) 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.

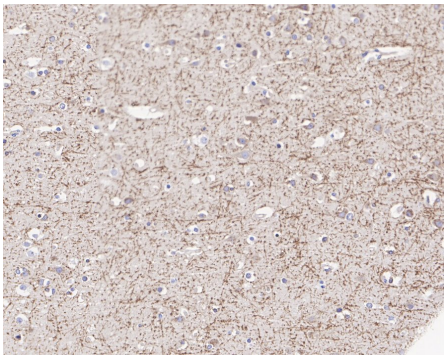

Fig3: Immunohistochemical analysis of paraffin-embedded human brain tissue with Rabbit anti-APP/β-Amyloid antibody (HA722139) at 1/1,000 dilution.

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 (HA722139) 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.

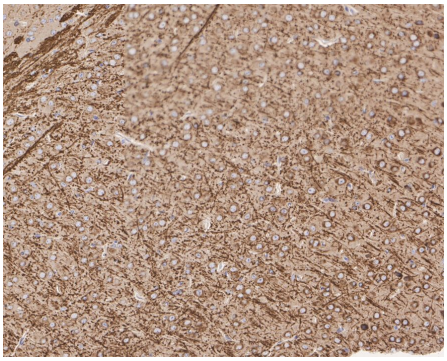

Fig4: Immunohistochemical analysis of paraffin-embedded mouse brain tissue with Rabbit anti-APP/β-Amyloid antibody (HA722139) at 1/1,000 dilution.

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 (HA722139) 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.

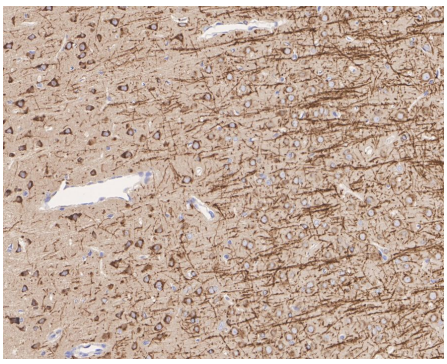

Fig5: Immunohistochemical analysis of paraffin-embedded rat brain tissue with Rabbit anti-APP/β-Amyloid antibody (HA722139) at 1/1,000 dilution.

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 (HA722139) 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.

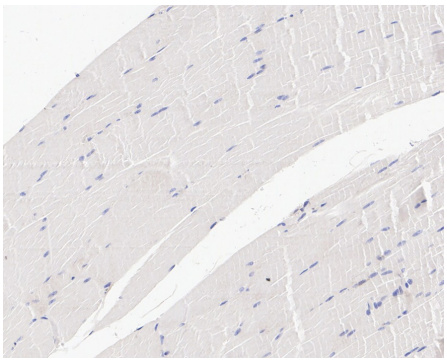

Fig6: Immunohistochemical analysis of paraffin-embedded human skeletal muscle tissue (negative) with Rabbit anti-APP/β-Amyloid antibody (HA722139) at 1/1,000 dilution.

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 (HA722139) 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.

Background References

1. Strope TA et al. Amyloid precursor protein and mitochondria. Curr Opin Neurobiol. 2023 Feb
2. Orobets KS et al. Amyloid Precursor Protein and Alzheimer's Disease. Int J Mol Sci. 2023 Sep