ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

LIFE TECH Life Technologies™ Your Molecular & Cell Technology Partner

Amyloid Precursor Protein (APP770) Antibodies

Cat. # APP11-S	**Chicken** Anti-Human Amyloid Precursor Protein (APP770) antisera	**SIZE**: 100 ul
Cat. # APP11-P	Human Amyloid Precursor Protein (APP770) control peptide	**SIZE**: 100 ug

Alzheimer's Disease (AD) is a neurodegenerative disorder characterized by progressive loss of memory and cognition in the elderly. One of the most important and initial step involves proteolytic cleavage of amyloid precursor protein (APP, chromosome 21) releasing short 40, 42 & 43 aa peptides (beta amyloid1-40, 1-42, and 1-43; approx. 4.5 kDa). Polymerization of b-amyloid (Ab) and subsequent neuronal deposit (amyloid) leads to the degeneration of neurons involved in memory and cognition. Ab deposits have also been found to contain 2 additional proteins termed α-synuclein and β-synuclein.

APP gene has 19 exons (1). At least 8 different types of APP (APP695, APP751, and APP770 are the major ones) are produced as a result of alternative splicing of exons 7, 8, and 15. Exons 7 codes for a 57-aa domain that is analogous to Kunitz protease inhibitors (KPI). Exon 8 codes for a 19-aa residue domain with homology to the MRC OX-2 antigen found on the membrane of neurons, while exon 15 codes for an 18-aa domain, 16 aa proximal to the Aβ region. APP695 lacks exons 7 and 8, whereas APP770 and APP751 represents the full length and the exon 8 lacking isoform. Beta amyloid A4 protein represents 597-638 aa of APP695 (28 aa from the extracellular domain and 14-15 aa from the extracellular domain). APP695 is predominantly expressed in the brain while APP751 and APP770 are also found in other tissues.

Source of Antigen and Antibodies

Antigen	15aa peptide of Human APP770 ; **Designated (APP11-P or control peptide).** **Epitope location** ~ Mid-region, Extracellular
Ab Host/type	Chicken, polyclonal, Antiserum (**cat #APP11-S**) unpurified
2-ab	Goat Anti-Chicken IgG-HRP cat # 60320 (AP, biotin, FITC conjugates also available)
-ve control	# 20010-1, Chicken (non-immune) IgG, purified, suitable for ELISA, Western, IHC as –ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)
100ul solution lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG
100 ug/100ul solution lyophilized powder
Supplied in **Buffer**: PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide
100 ug/100 ul solution lyophilized powder
Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at 20°C and powder at 4°C or -20°C..

Long-term: at –20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

Stability: 6-12 months at –20°C or below.
Shipping: 4°C for solutions and room temp for powder

Recommended Usage

Western Blotting 1:1K for neat serum using Chemiluminescence technique).

ELISA (1:10K-1:100K; using 50-100 ng of control peptide/well).

Histochemistry & Immunofluorescence: Not tested**.** We recommend the use of 1:50 to 1:500 using formalin-fixed paraffin embedded tissues or 4% paraformaldehyde fixed frozen sections.

Specificity & Cross-reactivity

The human APP11-P peptide sequence is only found in APP that contains the KPI region (i.e., APP770 isoform). The APP11-P sequence is the same in mouse and rat APP770 isoforms. Antibody crossreactivity in various species is not established. Control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at the web site).

General References: 1. Rohan HA et al (1997) Mol. Brian Res. 47, 147-156; Kang J et al (1987) Nature 325, 733; Kang J et al (1989) Nucleic Aacid Res. 17, 2130; Shivers BD et al (1988) EMBO J. 7; 1365-1370; Ponte P et al (1988) Nature 3, 31, 525-527; Schilling J et al (1991) Gene 98, 225-230; Yoshikai S et al (1987) Gene 87, 257-263; Neve R et al (1992) PNAS 89, 3448; Goldgaber D et al (1987) Science 235, 877; Yankner B et al (1989) Science 245, 417; Golde T et al (1992) Science 255, 728

*This product is for In vitro research use only.

Related material available from ADI

Ant-Beta amyloid 1-40, 1-42, APP, Parkin, Synucleins (α, β, γ), Presenilins 1, 2

Study distribution of proteins with pre-made brain blots representing 12 distinct region of the mouse and rat brain.

Recycle your blot in Just 5-10 min. (use the same strip for various antibodies)

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