

Product Specification Sheet

Caspase-6 (ICE-6, MCH-2, CASP-6) Antibodies

Cat. # CASP61-P	Human Caspase-6 Control Peptide	SIZE: 100 ug
Cat. # CASP61-C	Human Recombinant Caspase-6 WB +ve Control	SIZE: 100 ul
Cat. # CASP61-A	Rabbit Anti-Human Caspase-6 IgG (aff pure)	SIZE: 100 ug

Apoptosis or programmed cell death is essential for normal tissue development and abnormal growth such as cancer, neurodegeneration, autoimmune diseases, and angiogenesis, etc. Apoptosis is driven by **caspases** (cysteine proteases that cleave after an aspartic acid residue). After the initial discovery of the first mammalian caspase 1 or ICE (interleukin 1 beta converting enzyme), a growing family of **caspases 1-14** have been cloned and characterized. Caspases are synthesized as inactive zymogen or proenzyme forms (30-55 kDa), which upon apoptotic stimulation are proteolytically processed (self or by other proteins) in a sequential manner into their active heterotetrameric forms. The processed form consists of large subunit (17-20 kDa) and a small (10-12 kDa) subunits, which may associate to form an active enzyme. Functionally active caspases initiate a proteolytic cascade, capable of cleaving and activating numerous cellular targets including PARP, G4-GDI, DFF, MEKK, etc. On a functional basis, two categories of caspases have been defined: the **initiator caspases** (caspases-8, -9, and -10) are activated in the earlier phases of apoptosis, whereas the **executioner caspases** (caspases-3, -6, and -7) are activated by initiator caspases and are responsible for dismantling cellular components.

Caspase-6, (also known as ICE-6, MCH-2, CASP-6) (Zymogen 35-40 kDa) is mapped at human chromosome 4q25q25 and executes the final apoptotic phase. The processed form of human is a heterotetramer consisting of two large ~18 kDa and two small ~11 kDa subunits. Alternative splicing of human CASP-6 results in two isoforms: alpha (293aa) and beta (204aa) but beta isoform does not have protease activity. Mouse (276aa) and rat (277aa) and human CASP-6 proenzymes are activated by CASP-3, -8 or -10. Unlike CASP-3 and MCH-3, Hs CASP-6 (MCH-3) can cleave lamin-A and -C in their signature apoptotic fragments. CASP-6 mediates the shrinkage and fragmentation of nuclei. It is highly expressed in lung, liver, kidney, testis and heart; lower levels in spleen, skeletal muscle and brain.

Source of Antigen and Antibodies

Antigen	15aa peptide (250-264aa of alpha)/(161-175aa of beta) of Human Caspase-6 (1); Designated (CASP61-P or control peptide). Epitope location ~ Internal
Ab Host/type	Rabbit, polyclonal, Aff pure IgG (cat # CASP61-A) purified over the antigen column
2ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available)
-ve control	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Human Caspase-6 (Mol wt, ~34 kDa) was expressed in E.coli and purified. It is supplied as **Western Blot +ve control (cat # CASP61-C)** to visualize with antibodies (**cat# CASP61-A**).

Form & Storage of Antibodies/Peptide Control

100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/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 (1-10 ug/ml for affinity pure antibody using ECL technique). The antibody (**cat # CASP61-A**) will recognize 34 kDa Procaspase-6 and alternatively spliced 22 kDa isoform-beta.

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested.

Specificity & Cross-reactivity

Human CASP61-P control peptide is 100% conserved in Human, mouse and rat caspase-6. Antibody (**CASP61-A**) recognizes Caspase-6 in mouse, rat human, monkey, bovine, sheep, rabbit, dog pig and hamster cells. 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 (detailed protocol is available at the web site).

General References: (1) Nasir, J et al (1997) Mamm. Genome 8, 611; Munday, NA et al (1995) JBC 270, 15870; Faucheu, C. et al (1995) Eur J. Biochem. 236, 207; Fernandes-Alnemri T. et al (1994) JBC 269, 30761; LeBlanc, A. et al (1999) JBC 274, 23426; Stennicke, HR & Salvesen, GS (1997) 272, 25719.

**This product is for In vitro research use only.*

Related material available from ADI

Antibodies AIF, Apaf-1, Cytochrome-C, Caspases, IAPs, Survivin, EPR-1, CARD, Flash, Aven, Livin, Iceberg

CASP61-A 71214S