

## Product datasheet

### ACTIVE CASPASE-6 RABBIT POLYCLONAL ANTIBODY

**SKU:** MM-0160

50 µL

#### OVERVIEW

**Clonality:**

Polyclonal

**Host:**

Rabbit

**Reactivity:**

Human

**Application:**

WB, IHC

**Target:**

Active Caspase-6

**Target background:**

Caspases are a family of cytosolic aspartate-specific cysteine proteases. Sequential activation of caspases plays a central role in the execution phase of cell apoptosis. Caspases exist as inactive proenzymes in the cytoplasm and are activated by dimerization or proteolytic cleavage. Together with caspase-3, caspase-6 is one of the major caspases in apoptotic cells, and functions downstream of apoptosis inhibitors Bcl-2 and Bcl-xL. Caspase-6 has also been shown to be involved in the proteolysis of poly (ADP-ribose) polymerase (PARP) and nuclear lamin A. Recently, caspases have been considered to play roles in the neuronal cell death associated with Alzheimer's disease (AD). Caspase-dependent increased  $\beta$ -amyloid peptide production can occur in various cell types; specifically, caspase-6 is thought to be responsible for increasing  $\beta$ -amyloid peptide in primary cultures of human neurons. Caspase-6 has also been demonstrated to be active in neuropil threads (NPTs), neurofibrillary tangles (NFTs), and neuritic plaques (NPs) in the hippocampus and temporal cortex in sporadic AD. A role for caspase-6 in the regulation of axonal pruning of sensory and retinocollicular axons and axonal degeneration in sensory and motor mouse neurons has also been demonstrated. As a result of its involvement in the cleavage of important synaptic and cytoskeleton proteins, in the generation of high levels of  $\beta$ -amyloid peptide, and for being activated very early in cognitive impairment and Alzheimer's disease (AD), activation of caspase-6 has been considered to be involved in the development of AD.

**Target alias:**

CASP6

**Immunogen:**

peptide PLDVVD

**Specificity:**

The antibody recognizes the human active caspase-6

**Clone ID:**

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**Preservative:**

None

**Format:**

Lyophilized serum

**Recommend starting dilution:**

If reconstituted with deionized water in 50  $\mu$ l: WB 1:5000; IHC 1:2000. Optimal dilution has to be determined by the user.

### **Limitations:**

Research Use Only

### **References:**

- 1.-Albrecht S - Caspase-6 activation in familial alzheimer disease brains carrying amyloid precursor protein or presenilin i or presenilin II mutations.
- 2.-Albrecht S - Activation of caspase-6 in aging and mild cognitive impairment.
- 3.-Guo H - Active caspase-6 and caspase-6-cleaved tau in neuropil threads, neuritic plaques, and neurofibrillary tangles of Alzheimer's disease.

### **Storage:**

Lyophilized antibodies can be kept at 4°C for up to 3 months and should be kept at -20°C for long-term storage (2 years). To avoid freeze-thaw cycles, reconstituted antibodies should be aliquoted before freezing for long-term (1 year) storage (-80°C) or kept at 4°C for short-term usage (2 months). For maximum recovery of product, centrifuge the original vial prior to removing the cap. Further dilutions can be made with the assay buffer. After the maximum long-term storage period (2 years lyophilized or 1 year reconstituted) antibodies should be tested in your assay with a standard sample to verify if you have noticed any decrease in their efficacy.

### **Image:**

