

anti-Activated Caspase 3 (p20/p17 subunit) antibody, rabbit serum (ACP3)

74-102 100 ul

Caspases are a family of cysteine proteases which play essential roles in apoptosis. Among them, **Caspase 3** is a frequently activated death protease, catalyzing the specific cleavage of many key cellular proteins. **Caspase 3** is synthesized as an inactive 32 kDa pro-enzyme which undergo proteolytic processing in response to apoptotic stimulation to produce the active form which consists of the p20/p17, and p12 subunits. **Caspase 3** is the predominant caspase involved in the cleavage of Alzheimer amyloid precursor protein (APP), which is associated with neuronal death in Alzheimer's disease. An antibody (named ACP3) against **activated caspase 3** was raised in rabbit. This antibody recognizes the active form of human **caspase 3**, p20/p17 subunit but does not recognize the proenzyme p32.

Applications:

1. Western blotting (dilution: 1/3,000-1/1,000)
2. Immunocytochemistry (dilution: 1/1,000-1/500)
3. ELISA

These applications were confirmed in the laboratory of Prof. K. Yoshikawa of Osaka University (ref.3).

Immunogen: Synthetic peptide corresponding to the caspase 3 cleavage site, 6 aa (CGIETD).

Specificity: Specific to the end of the **activated caspase 3** of human, mouse and rat. The antibody **does not react with the proenzyme p32**.

Form: Antiserum added with 0.05% sodium azide.

Storage: Shipped at 4 °C and stored at -20 °C.

Data Link: Swiss-Prot [P42574](#)

References: This antibody was used in ref.3 and 4.

1. Thornberry NA and Lazebnik Y (1998) "Caspases: enemies within." *Science* **281**: 1312-1316 PMID: [9721091](#)
2. Uetsuki T *et al* (1999). "Activation of neuronal caspase-3 by intracellular accumulation of wild-type Alzheimer precursor protein." *J Neurosci* **19**: 6955-6964 PMID: [10436052](#)
3. Nishimura I *et al.* (2002) "Cell death induced by a caspase-cleaved transmembrane fragment of the Alzheimer amyloid precursor protein." *Cell Death Differ.* **9**: 199-208 PMID: [11840170](#)
4. Nishimura I *et al.* (2003) "Upregulation and antiapoptotic role of endogenous Alzheimer amyloid precursor protein in dorsal root ganglion neurons." *Exp. Cell Res.* **286**: 241-251 PMID: [12749853](#)

Related products: #74-104 anti-APP (C-terminal) antibody, #74-106 anti-APP (N-terminal) antibody, #74-108 anti-APP (C-terminal of the caspase 3- cleaved APP) antibody, #74-110 anti-APP 31 (specific to C-terminal APP 31) antibody

To be continued.

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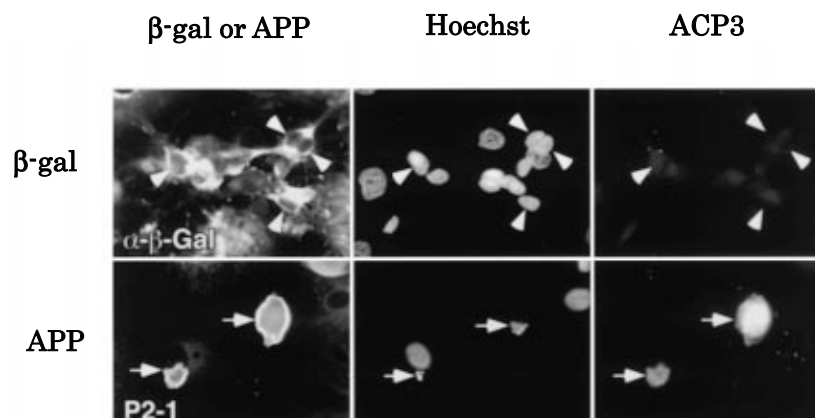


Fig.1 Immunocytochemistry for APP, chromosomal DNA, and activated caspase 3 subunits : Caspase 3 activation in neurons accumulating wild-type APP (ref.3).

NT2 neurons (neurally differentiated human NT2 embryonic carcinoma cells) were infected with adenovirus vector expressing β -galactosidase (upper panel) or APP (lower panel), fixed 48 h later, and triply stained for the N-terminus of APP (with antibody P2-1) or β -gal (with antibody against β -gal), chromosomal DNA (Hoechst), and activated caspase 3 subunits (with antibody ACP3). Some neurons accumulating APP are strongly immunostained with ACP3 (arrows), whereas neurons accumulating β -gal are hardly labeled (arrowheads).