

Rabbit Anti-Caspase-10/FLICE2 Polyclonal Antibody

Cat # NB-30-00488

Description

Apoptosis, or programmed cell death, is a common property of all multicellular organisms. The current dogma of apoptosis suggests that the components of the core cell-death machinery are integral to cells and widely conserved across species. Caspases, a family of cysteinyl aspartate-specific proteases, are integral components of the cell death machinery (reviewed in Siegal, 2006; and Lavrik et al, 2005). They play a central role in the initiation and execution of apoptotic cell death and in inflammation. Caspases are typically divided into 3 major groups, depending on the structure of their prodomain and their function. Group I: inflammatory caspases (caspases 1, 4, 5, 11, 12, 14). Group II: initiator of apoptosis caspases (caspases 2, 8, 9). Group III: effector caspases (caspases 3, 6, 7). Caspases are constitutively expressed in almost all cell types as inactive proenzymes (zymogens: enzyme precursors which require a biochemical change to become active enzymes) that are processed and activated in response to a variety of pro-apoptotic or inflammatory stimuli. The procaspases (32-56 kDa) contain four domains: an N-terminal prodomain (2-25 kDa), a large subunit (p20: 17-21 kDa), a small subunit (p10: 10-13 kDa) and a short linker region between the large and small subunits. Caspase activation involves proteolytic processing of the proenzyme at specific aspartate residues between the domains. This results in removal of the prodomain as well as the linker region and formation of a heterodimer containing one large and one small subunit (p20-p10). The active caspase is a tetramer composed of two heterodimers (p20₂-p10₂). Active caspases mediate cell death and inflammation through cleavage of particular cellular substrates that are involved in these processes. Caspase-10 is a 455 amino acid protein. However, caspase-10 produces, by alternative splicing, at least 12 different transcripts, all with introns, putatively encoding at least 11 different protein isoforms. For example, human caspase-10a is a 479 amino acid (aa) protein, and human caspase-10d is a 522 aa protein. The transcripts appear to differ by truncation of the 3' end, presence or absence of 6 cassette exons, or common exons with different boundaries, because an internal intron is not always spliced out. Users are encouraged to go to the NCBI ACE View Data Base for more information. <http://www.ncbi.nih.gov/IEB/Research/Acembly/> Caspase-10 gene mutations or polymorphisms have been associated with a number of diseases including type II autoimmune lymphoproliferative syndrome, non-Hodgkin's lymphoma, and gastric cancer. It is thought that some mutations of the caspase-10 gene may lead to the loss of its apoptotic function, thereby contributing to the pathogenesis of some diseases. Caspase-10 may be observed on Western blots at varying apparent molecular weights depending on isoform, truncation, or cleavage forms present. The antisera recognize caspase-10 forms that contain the peptide immunogen sequence (QPAFTLRKKLVFPVPLDALSI).

Product informations

Clonality:	Polyclonal
Application:	IP, IHC, WB
Reactivity:	Dog, Rat, Mouse, Human
Gene:	CASP10
Gene ID:	843
Uniprot ID:	Q92851
Format:	Sera
Alternative Name:	CASP10,MCH4
Isotype :	Rabbit IgG
Immunogen Information:	A synthetic peptide of Caspase-10/FLICE2 protein (amino acids 435-455 QPAFTLRKKLVFPVPLDALSI) was used as the immunogen for this antibody
Amount:	50 µl
Content:	50 µl sera
Storage condition:	Store the antibody at 4°C, stable for 6 months. For long-term storage, store at -20°C. Avoid repeated freeze and thaw cycles.

Application Note

WB: 1:1000-1:5000, IHC (paraffin): 1:1000-1:5000, IHC (frozen): Users should optimize IP: 1:50-1:200, Immuno-EM.

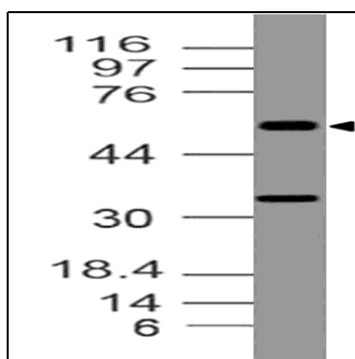


Figure-1: Western blot analysis of Caspase-10/FLICE2. Anti- Caspase-10/FLICE2 antibody (20-1049) was used with 1:1000 dilution on Hela lysate.