

Basic Information

Product Name	Anti-Caspase 3/CASP3 (p17) Antibody (Clone#15G8)	
Gene Name	CASP3	
Source	Mouse	
Isotype	IgG1	
Species Reactivity	human	
Tested Application	WB, IHC, ICC/IF	
Contents	500 ug/ml antibody with PBS , 0.02% NaN ₃ , 1 mg BSA and 50% glycerol.	
Immunogen	E.coli-derived human Caspase-3 recombinant protein (Position: T67-D175). Human Caspase-3 shares 86% and 90% amino acid (aa) sequence identity with mouse and rat Caspase-3, respectively.	
concentration	500 ug/ml	
Purification	protein G purified.	
Observed MW	(cleaved)20KD	
Dilution Ratios	Western blot(WB): 1:500-2000 Immunohistochemistry in paraffin section (IHC): 1:50-400 Immunocytochemistry/Immunofluorescence (ICC/IF): 1:50-400 (Boiling the paraffin sections in 10mM citrate buffer,pH6.0,or PH8.0 EDTA repair liquid for 20 mins is required for the staining of formalin/paraffin sections.) Optimal working dilutions must be determined by end user.	

Storage

12 months from date of receipt, -20°C as supplied. 6 months 2 to 8°C after reconstitution. Avoid repeated freezing and thawing.

Background Information

Caspase 3 is a caspase protein which interacts with Survivin, XIAP, CFLAR, Caspase 8, HCLS1, Deleted in Colorectal Cancer, TRAF3 and GroEL. This gene which is located on 4q35 encodes a protein that is a member of the cysteine-aspartic acid protease (caspase) family. Sequential activation of caspases plays a central role in the execution-phase of cell apoptosis. Caspases exist as inactive proenzymes that undergo proteolytic processing at conserved aspartic residues to produce two subunits, large and small, that dimerize to form the active enzyme. It is the predominant caspase involved in the cleavage of amyloid-beta 4A precursor protein, which is associated with neuronal death in Alzheimer's disease. And the caspase-3 activation in heart failure sequentially cleaves SRF and generates a truncated SRF that appears to function as a dominant-negative transcription factor. Additionally, the caspase-3 influence on bone mineral density should be considered in any in vivo application of caspase-3 inhibitors to the treatment of human disease. In erythroid precursors undergoing terminal differentiation, Hsp70 prevents active CASP3 from cleaving GATA1 and inducing apoptosis.

Selected Validation Data

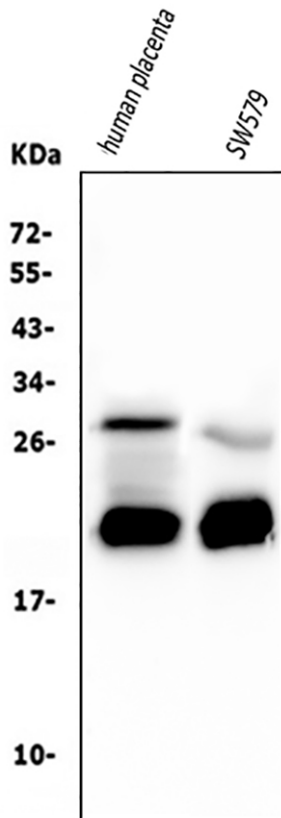


Figure 1. Western blot analysis of anti- CASP3 antibody (M00334-7). The sample well of each lane was loaded with 50ug of sample under reducing conditions.

Lane 1: human placenta tissue lysates,

Lane 2: human SW579 whole cell lysates, Use mouse anti- CASP3 1:1000, probed with a goat anti-mouse IgG-HRP secondary antibody. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001). A specific band was detected for CASP3 at approximately 20KD. The expected band size for CASP3 is at 32KD.

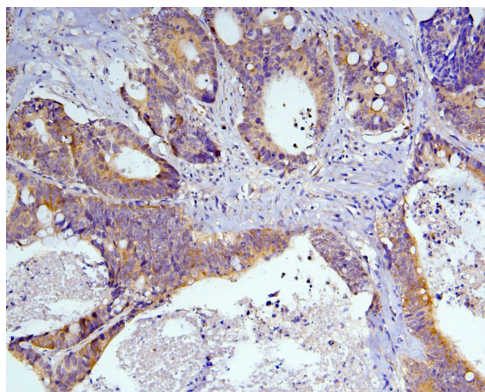


Figure 2. IHC analysis using anti-CASP3 antibody (M00334-7). detected in paraffin-embedded section of human intestinal cancer tissue. Biotinylated goat anti-mouse IgG was used as secondary antibody. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

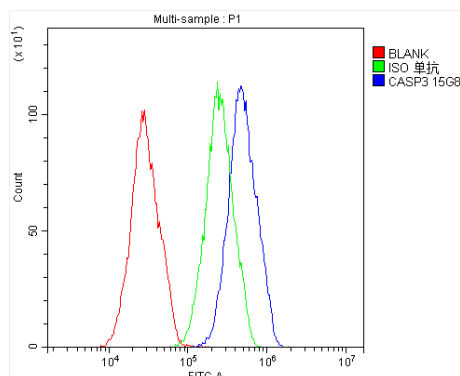


Figure 4. Flow cytometry analysis of HepG2 cell HELA (1x10⁶). DyLight 488 conjugated goat anti-mouse IgG (blue) was used as secondary antibody. Isotype control antibody (Green line) was mouse IgG DyLight 488. Unlabelled sample (Red line).

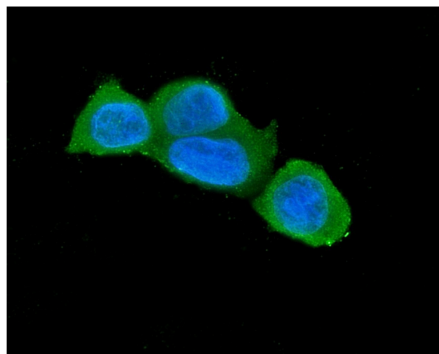


Figure 5. ICC analysis using anti-CASP3 antibody (M00334-7) was detected in immersion fixed MCF-7 cell line. Cells were stained using the DyLight 488-conjugated Anti-mouse IgG Secondary Antibody (green) (Catalog # BA1127) and counterstained with DAPI (blue).