

## Anti-Caspase-3 Polyclonal Antibody 2

## Product Details

Ig Type:	IgG
Reactivity:	Human
Molecular Weight:	Theoretical: 32 kDa. Actual: 35 kDa.
Purification:	Protein A purified

## Applications

Verified Activity:	1. 25 µg total protein per lane of various lysates (see on figure) probed with Caspase-3 polyclonal antibody, unconjugated (TMAB-03661) at 1:1000 dilution and 4°C overnight incubation. Followed by conjugated secondary antibody incubation at r. T. for 60 min.
	2. Paraformaldehyde-fixed, paraffin embedded Human Cervical Cancer; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with Caspase-3 Polyclonal Antibody, Unconjugated (TMAB-03661) at 1: 200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit) and DAB staining.
	3. Paraformaldehyde-fixed, paraffin embedded Human Tonsil; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with Caspase-3 Polyclonal Antibody, Unconjugated (TMAB-03661) at 1: 200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit) and DAB staining.
	4. Paraformaldehyde-fixed, paraffin embedded Human Spleen; Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15 min; Antibody incubation with Caspase-3 Polyclonal Antibody, Unconjugated (TMAB-03661) at 1: 200 overnight at 4°C, followed by conjugation to the SP Kit (Rabbit) and DAB staining.
Application:	WB,IHC-P,IHC-Fr,IF
Recommended	WB: 1:1000-5000; IHC-P: 1:200-800; IHC-Fr: 1:200-800; IF: 1:200-800

## Properties

Stability & Storage:	Store at -20°C or -80°C for 12 months. Avoid repeated freeze-thaw cycles.
Shipping:	Shipping with blue ice.

## Antigen Details

Immunogen:	Recombinant Protein: human Caspase-3
Antigen Species:	Human
Gene ID:	836
Uniprot ID:	P42574

## Research Background

The caspase family of cysteine proteases play a key role in apoptosis. Caspase 3 is the most extensively studied apoptotic protein among caspase family members. Caspase 3 is synthesized as inactive pro enzyme that is processed in cells undergoing apoptosis by self proteolysis and/or cleavage by other upstream proteases (e.g. Caspases 8, 9 and 10). The processed form of Caspase 3 consists of large (17kDa) and small (12kDa) subunits which associate to form an active enzyme. Caspase 3 is cleaved at Asp28 Ser29 and Asp175 Ser176. The active Caspase 3

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proteolytically cleaves and activates other caspases (e.g. Caspases 6, 7 and 9), as well as relevant targets in the cells (e.g. PARP and DFF). Alternative splicing of this gene results in two transcript variants which encode the same protein. In immunohistochemical studies Caspase 3 expression has been shown to be widespread but not present in all cell types (e.g. commonly reported in epithelial cells of skin, renal proximal tubules and collecting ducts). Differences in the level of Caspase 3 have been reported in cells of short lived nature (eg germinal centre B cells) and those that are long lived (eg mantle zone B cells). Caspase 3 is the predominant caspase involved in the cleavage of amyloid beta 4A precursor protein, which is associated with neuronal death in Alzheimer's disease.

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Tel:781-999-4286 E\_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481