

Anti-Caspase-3 Antibody Picoband® (monoclonal, 15G8) Fluoro488 Conjugated

Catalog Number: M00334-7-Fluoro488

About CASP3

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.

Overview

Product Name	Anti-Caspase-3 Antibody Picoband® (monoclonal, 15G8) Fluoro488 Conjugated
Reactive Species	Human
Application	Recommended applications are based on the parent unconjugated antibody (Flow Cytometry, IF, IHC, ICC, WB). Customers may select suitable applications according to their experimental needs.
Clonality	Monoclonal 15G8
Formulation	Each vial contains 50% glycerol, 0.9% NaCl, 0.2% Na ₂ HPO ₄ , 0.02% NaN ₃ .
Storage Instructions	At -20°C for one year from date of receipt. Avoid repeated freezing and thawing. Protect from light.
Host	Mouse
Uniprot ID	P42574

Technical Details

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.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG1
Form	Liquid
Concentration	0.5 mg/mL

Purification	Immunogen affinity purified.
Conjugate	Fluoro488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Suggested Dilutions	Optimal dilutions should be determined by end users.

17 Publications Citing This Product

1. PubMed ID: 30655770, Liu DX, Li PP, Guo JP, Li LL, Guo B, Jiao HB, Wu JH, Chen JM. Exosomes derived from HBV-associated liver cancer promote chemoresistance by upregulating chaperone-mediated autophagy. *Oncol Lett.* 2019 Jan; 17(1):323-331. doi:10.3892/ol.2018.9584. Epub 2018 Oct 16. PMID:30655770; PMCID: PMC6313222.

2. PubMed ID: 31702040, Zhang Z, Wang J, Zhu Y, Zhang H, Wang H. Astragaloside IV alleviates myocardial damage induced by type 2 diabetes via improving energy metabolism. *Mol Med Rep.* 2019 Nov; 20(5):4612-4622. doi:10.3892/mmr.2019.10716. Epub 2019 Oct 1. PMID:31702040; PMCID: PMC6797977.

3. PubMed ID: 33044585, Yu Y, Wang Y, Fei X, Song Z, Xie F, Yang F, Liu X, Xu Z, Wang G. All-Trans Retinoic Acid Prevented Vein Grafts Stenosis by Inhibiting Rb-E2F Mediated Cell Cycle Progression and KLF5-RARalpha Interaction in Human Vein Smooth Muscle Cells. *Cardiovasc Drugs Ther.* 2020 Oct

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