Revision 3

Store at -20C

#8698

Cleaved Caspase Substrate Motif [DE(T/S/A)D] MultiMab® Rabbit mAb mix

Cell Signaling TECHNOLOGY®

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For Research Use Only. Not for Use in Diagnostic Procedures.

Applications:	Reactivity:	Sensitivity:	Source/Isotype:
W	All	Endogenous	Rabbit IgG

Product Usage Information

Application	Dilution
Western Blotting	1:1000

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. Do not aliquot the antibody.

Specificity/Sensitivity

Cleaved Caspase Substrate Motif [DE(T/S/A)D] MultiMab® Rabbit mAb mix recognizes endogenous levels of caspase-cleaved proteins with a carboxy-terminal aspartic acid residue, and in rare cases a carboxy-terminal glutamic acid residue . This antibody does not cross-react with whole proteins or those ending with a different carboxy-terminal residue.

Source / Purification

MultiMab® rabbit monoclonal mix antibodies are prepared by combining individual rabbit monoclonal clones in optimized ratios for the approved applications. Each antibody in the mix is carefully selected based on motif recognition and performance in multiple assays. Each mix is engineered to yield the broadest possible coverage of the modification being studied while ensuring a high degree of specificity for the modification or motif.

Background

Apoptosis is a physiological process resulting in a highly regulated, programmed form of cell death that is a normal part of growth and development in multicellular organisms. Caspases are aspartic acid-directed cysteine proteases that are central to the apoptotic mechanism (1). The intrinsic pathway initiates an apoptotic cascade from signals originating within the cell, such as DNA damage, while an extrinsic pathway initiates apoptosis in response to extracellular signals, like FasL. In both intrinsic and extrinsic pathways, initiator caspases cleave downstream substrates, including multiple effector caspases and the primary executioner of cell death, caspase-3 (2,3). Effector caspases amplify the apoptotic cascade to target many critical proteins needed for normal cell function. Apart from its role in developmental biology, the regulation of apoptosis has broad implications for the study of cancer, autoimmune disorders and infectious diseases (4). Thousands of known and putative caspase cleavage sites are present within the human proteome; almost all sites involve cleavage at an aspartic acid residue, though cleavage at glutamic acid residues is seen, rarely, as well (5).

Background References

1. Cohen, G.M. (1997) *Biochem J* 326 (Pt 1), 1-16.
2. Kaufmann, T. et al. (2012) *Cell Death Differ* 19, 42-50.
3. Alenzi, F.Q. et al. (2010) *Asian Pac J Cancer Prev* 11, 271-80.
4. Favaloro, B. et al. (2012) *Aging (Albany NY)* 4, 330-49.
5. Fischer, U. et al. (2003) *Cell Death Differ* 10, 76-100.

Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

Western Blot Buffer

IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

Applications Key

W: Western Blotting

Cross-Reactivity Key

All: All Species Expected

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Limited Uses

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