

Product Information

Monoclonal Anti-DFF45, Clone 3F12

produced in mouse, purified immunoglobulin

Catalog Number **SAB4200199**

Product Description

Monoclonal Anti-DFF45 (mouse IgG1 isotype) is derived from the hybridoma 3F12 produced by the fusion of mouse myeloma cells and splenocytes from BALB/c mice immunized with a human DFF45 (GeneID: 1676) recombinant protein. The human protein shares 77% homology with the mouse protein. The isotype is determined by ELISA using Mouse Monoclonal Antibody Isotyping Reagents, Catalog Number ISO2. The antibody is purified from culture supernatant of hybridoma cells grown in a bioreactor.

Monoclonal Anti-DFF45 recognizes human DFF45 isoform 1 and isoform 2. The antibody may be used in several immunochemical techniques including immunoblotting (~45 kDa and ~37 kDa).

Apoptosis is a cell death process that removes toxic and/or useless cells during mammalian development. The apoptotic process is accompanied by shrinkage and fragmentation of the cells and nuclei and degradation of the chromosomal DNA into nucleosomal units. DNA fragmentation factor (DFF) is a heterodimeric protein of 40 kDa (DFF40/DFFB/CAD) and 45 kDa (DFF45/DFFA/ICAD) subunits. DFF45 is a caspase-3 substrate and triggers DNA fragmentation during apoptosis. DFF becomes activated when DFF45 is cleaved by caspase-3. The cleaved fragments of DFF45 dissociate from DFF40, the active component of DFF. DFF40 has been found to trigger both DNA fragmentation and chromatin condensation during apoptosis. Two alternatively spliced transcript variants encoding distinct isoforms have been found for this gene.¹⁻⁵

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~ 1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at -20 °C. For continuous use, the product may be stored at 2-8 °C for up to one month. For extended storage, freeze at -20 °C in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working antibody concentration of 1-2 µg/mL is recommended using whole extracts of human G361 cells.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

1. Liu, X., et al., *Cell*, **89**, 175-184 (1997).
2. Enari, M., et al., *Nature*, **391**, 43-50 (1998).
3. Liu, X., et al., *J. Biol. Chem.*, **274**, 13836-13840 (1999).
4. Omata, K., et al., *Apoptosis*, **13**, 929-937 (2008).
5. Park, H.H., *BMB Rep.*, **42**, 713-718 (2009).

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