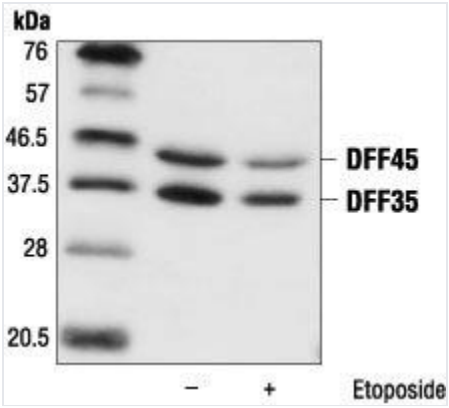
DFF35, 45 (DFFA) Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	DFF35, 45 (DFFA), Polyclonal Antibody
Full Product Name	DFF35, 45 (ICAD, DNA Fragmentation Factor, Inhibitor of Caspase Activated Deoxyribonuclease)
Product Gene Name	anti-DFFA antibody
Product Synonym Names	Anti -DFF35, 45 (ICAD, DNA Fragmentation Factor, Inhibitor of Caspase Activated Deoxyribonuclease)
Clonality	Polyclonal
Isotype	IgG
Host	Rabbit
Species Reactivity	Human
Form/Format	Supplied as liquid in 10mM HEPES, pH 7.5, 150mM sodium chloride, 0.1mg/ml BSA, 50% glycerol. No preservative added.
Purity/Purification	Affinity Purified Purified by Protein A affinity chromatography.
Specificity	Detects endogenous levels of total full length DFF45 and/or full length DFF35. This antibody does not crossreact with related proteins.
Preparation and Storage	May be stored at 4 degree C for short-term only. For long-term storage, store at -20 degree C. Aliquots are stable for at least 12 months at -20 degree C. For maximum recovery of product, centrifuge the original vial after thawing and prior to removing the cap. Further dilutions can be made in assay buffer.
Molecular Weight	36,522 Da
Chromosome Location	Chromosome: 1; NC_000001.10 (10520588..10532613, complement). Location: 1p36.3-p36.2
OMIM	601882
3D Structure	ModBase 3D Structure for O00273
Immunogen	Synthetic peptide (KLH coupled) corresponding to residues around Asp224 of human DFF45.
Product Categories/Family for anti-DFFA antibody	Antibodies; Abs to Apoptosis; Caspase
Applications Tested/Suitable for anti-DFFA antibody	ELISA (EL/EIA), Western Blot (WB), Immunoprecipitation (IP)
Application Notes for anti-DFFA antibody	Dilution: Western Blot: 1:1000 Immunoprecipitation: 1:50
Related Product Information for anti-DFFA antibody	Human DFF45 and its mouse homologue ICAD function in normal cells as chaperones for caspase-activated deoxyribonuclease (DFF40 or CAD) during its synthesis (1). The association of DFF45 (or its isoform DFF35) with DFF40 inhibits the DNAse activity of the latter (1-4). In vitro, DFF45 has been shown to be the target of several caspases including caspase-3,-6,-7,-8 and granzyme B (3). In vivo, caspase-3 is believed to be the primary enzyme responsible for processing DFF45 and for release of its C-terminal fragment (3,5). The cleavage of DFF45 inactivates its inhibitory function on DFF40 and causes nuclear DNA degradation by DFF40, leading to cell death (6,7).
Other Notes	Small volumes of anti-DFFA antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.

Searchable Terms for DFFA purchase	MBS617288 is an antibody targeting DFFA. Also known as DFF35, 45 (ICAD, DNA Fragmentation Factor, Inhibitor of Caspase Activated Deoxyribonuclease). Reactive in Human. Host: Rabbit.



Western Blot (WB) of anti-DFFA antibody
Western Blot analysis of Jurkat cells, untreated (control) or etoposide-treated (25 uM), using DFF45/DFF35 Antibody.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for DFFA. It may not necessarily be applicable to this product.

NCBI GI #	4926918
NCBI GeneID	1676
UniProt Primary Accession #	O00273
UniProt Secondary Accession #	Q5T6G5; Q96I97; Q9Y6C6
UniProt Related Accession #	O00273; Q53HN4; Q5T6G6
NCBI Official Full Name	DNA fragmentation factor DFF35
NCBI Official Synonym Full Names	DNA fragmentation factor, 45kDa, alpha polypeptide
NCBI Official Symbol	DFFA
NCBI Official Synonym Symbols	DFF1; ICAD; DFF-45
UniProt Protein Name	DNA fragmentation factor subunit alpha
UniProt Synonym Protein Names	DNA fragmentation factor 45 kDa subunit; DFF-45; Inhibitor of CAD
Protein Family	DNA fragmentation factor
UniProt Gene Name	DFFA
UniProt Synonym Gene Names	DFF1; DFF45
UniProt Entry Name	DFFA_HUMAN
NCBI Protein Information	DNA fragmentation factor subunit alpha; DFF45; inhibitor of CAD; OTTHUMP00000001903; OTTHUMP00000001904; DNA fragmentation factor 45 kDa subunit
NCBI Summary for DFFA	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-kD (DFFB) and 45-kD (DFFA) subunits. DFFA is the substrate for caspase-3 and triggers DNA fragmentation during apoptosis. DFF becomes activated when DFFA is cleaved by caspase-3. The cleaved fragments of DFFA dissociate from DFFB, the active component of DFF. DFFB 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. [provided by RefSeq]

UniProt Comments for DFFA	DFFA: Inhibitor of the caspase-activated DNase (DFF40). Heterodimer of DFFA and DFFB. 2 isoforms of the human protein are produced by alternative splicing. Protein type: Hydrolase Chromosomal Location of Human Ortholog: 1p36.3-p36.2 Cellular Component: nucleoplasm; nuclear chromatin; cytoplasm; lipid particle; nucleus; cytosol Molecular Function: protein binding Biological Process: apoptosis; positive regulation of apoptosis; DNA fragmentation during apoptosis; cell structure disassembly during apoptosis
Research Articles on DFFA	**1.** study reveals a previously unrecognized function of miR-145 in DFF45 processing, which may underlie crucial aspects of cancer biology
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