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DFF45 Antibody

Catalog # ASC10022

Product Information

Application	WB, ICC, E
Primary Accession	O00273
Other Accession	NP_004392, 4758148
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	36522
Conjugate	Unconjugated
Application Notes	DFF45 antibody can be used for detection of DFF45 and one of the cleaved fragments of DFF45 by Western blot at at 0.5 - 1 □g/mL and for immunoprecipitation. A 45 kDa band can be detected in non-apoptotic cells. Antibody can also be used for immunocytochemistry starting at 5 □g/mL.

Additional Information

Gene ID	1676
Other Names	DFF45 Antibody: DFF1, ICAD, DFF-45, DFF1, DFF45, H13, DNA fragmentation factor subunit alpha, DNA fragmentation factor 45 kDa subunit, DNA fragmentation factor, 45kDa, alpha polypeptide
Target/Specificity	DFFA;
Reconstitution & Storage	DFF45 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	DFF45 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DFFA
Synonyms	DFF1, DFF45
Function	Inhibitor of the caspase-activated DNase (DFF40).
Cellular Location	Cytoplasm.

Background

DFF45 Antibody: Apoptosis is related to many diseases and induced by a family of cell death receptors and their ligands. Cell death signals are transduced by death domain containing adapter molecules and members of the caspase family of proteases. These death signals finally cause the degradation of chromosomal DNA by activated DNase. A human 45 kDa DNA fragmentation factor (DFF45) was identified recently which was cleaved by caspase-3 during apoptosis. Mouse homologue of human DFF45 was identified as a DNase inhibitor designated ICAD. Upon cleavage of DFF45/ICAD, a caspase activated deoxyribonuclease (DFF40/CAD) is released and activated and eventually causes the degradation of DNA in the nuclei. Therefore, the cleavage of DFF45/ICAD, which causes DFF40/CAD activation and DNA degradation, is the hallmark of apoptotic cell death.

References

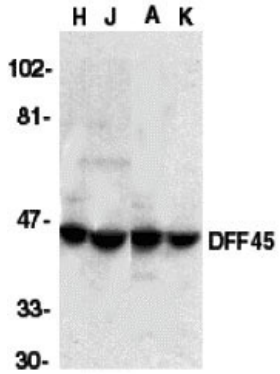
Liu X, Zou H, Slaughter C, Wang X. DFF, a heterodimeric protein that functions downstream of caspase-3 to trigger DNA fragmentation during apoptosis. Cell 1997;89:175-184

Enari M, Sakahira H, Yokoyama H, Okawa K, Iwamatsu A, Nagata S. A caspase-activated DNase that degrades DNA during apoptosis, and its inhibitor ICAD. Nature 1998;391:43-50

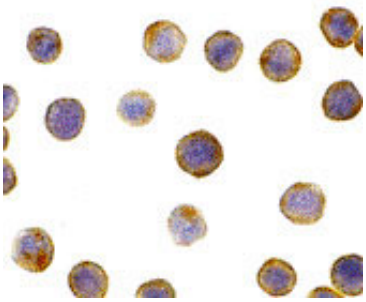
Sakahira H, Enari M, Nagata S. Cleavage of CAD inhibitor in CAD activation and DNA degradation during apoptosis. Nature 1998;391:96-99

Liu X, Li P, Widlak P, Zou H, Luo X, Garrard WT, Wang X. The 40-kDa subunit of DNA fragmentation factor induces DNA fragmentation and chromatin condensation during apoptosis. Proc Natl Acad Sci USA 1998;95:8461-6

Images



Western blot analysis of DFF45 in HeLa (H), Jurkat (J), A431 (A), and K562 (K) whole cell lysate with DFF45 antibody at 1:1000 dilution.



Immunocytochemistry of DFF45 in HeLa cells with DFF45 antibody at 5 µg/mL.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.