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DFF40 Antibody

Catalog # ASC10059

Product Information

Application	WB, ICC, E
Primary Accession	O54788
Other Accession	NP_031885, 160948620
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	39449
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	DFF40 antibody can be used for detection of DFF40 by Western blot 0.5 g/mL. A 40 kDa band can be detected. Antibody can also be used for immunocytochemistry starting at 5 g/mL.

Additional Information

Gene ID	13368
Other Names	DFF40 Antibody: CAD, CPAN, 40kDa, DFF40, Didff, 5730477D02Rik, Cad, DNA fragmentation factor subunit beta, Caspase-activated deoxyribonuclease, CAD, DNA fragmentation factor, beta subunit
Target/Specificity	Dffb;
Reconstitution & Storage	DFF40 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	DFF40 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Dffb
Synonyms	Cad
Function	Nuclease that induces DNA fragmentation and chromatin condensation during apoptosis. Degrades naked DNA and induces apoptotic morphology.
Cellular Location	Cytoplasm. Nucleus.

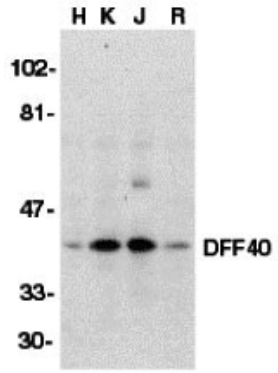
Background

DFF40 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 mouse DNase that causes DNA fragmentation was identified recently and designated CAD (for caspase activated deoxyribonuclease). The human homologue of mouse CAD was more recently identified by three groups independently and termed CPAN, DFF40, and human CAD, respectively. DFF45/ICAD is the inhibitory protein of DFF40/CAD and forms complex with DFF40/CAD. Upon cleavage of DFF45/ICAD by activated caspase, DFF40/CAD is released and activated and eventually causes the degradation of DNA in the nuclei. Activation of DFF40/CAD, which causes DNA degradation, is the hallmark of apoptotic cell death.

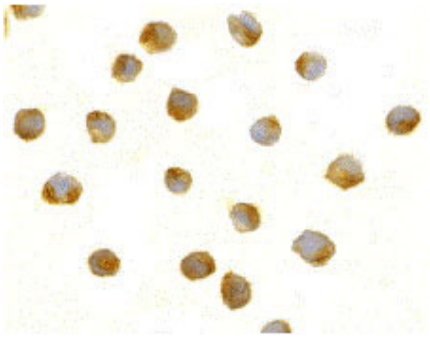
References

Enari M, Sakahira H, Yokoyama H, et al. A caspase-activated DNase that degrades DNA during apoptosis, and its inhibitor ICAD. Nature 1998; 391:43-50.
Sakahira H, Enari M, and Nagata S. Cleavage of CAD inhibitor in CAD activation and DNA degradation during apoptosis. Nature 1998; 391:96-99.
Halenbeck R, MacDonald Human, Ratoulston A, et al. CPAN, a human nuclease regulated by the caspase-sensitive inhibitor DFF45. Curr. Biol. 1998; 8:537-40.
Liu X, Li P, Widlak P, at al. 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 DFF40 in HeLa (H), K562 (K), Jurkat (J), and Raji (R) whole cell lysate with DFF40 antibody (I18) at 1:500 dilution.



Immunocytochemistry of DFF40 in Jurkat cells with DFF40 antibody at 5 µg/mL.

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