

**DFF40 Antibody**  
**Catalog # ASC10075****Specification**

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**DFF40 Antibody - Product Information**

|                   |   |
|-------------------|---|
| Application       | ICC   |
| Primary Accession | <a href="#">O54788</a>  |
| Other Accession   | <a href="#">NP_004393</a> , <a href="#">13368</a>   |
| Reactivity        | Human, Mouse, Rat   |
| Host              | Rabbit  |
| Clonality         | Polyclonal  |
| Isotype           | IgG   |
| Calculated MW     | 40 kDa KDa  |
| Application Notes | DFF40 antibody can be used for detection of DFF40 /CAD by Western blot at 0.5 - 2 µg/mL. dilution. A 40 kDa band can be detected. Antibody can also be used for immunocytochemistry starting at 10 µg/mL. |

**DFF40 Antibody - 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**

DFF40 antibody was raised against a 16 amino acid peptide near the center of human DFF40. The immunogen is located within amino acids 190 - 240 of DFF40.

**Reconstitution & Storage**

DFF40 antibody can be stored at 4°C for three months and -20°C, 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.

**DFF40 Antibody - Protein Information****Name** Dffb**Synonyms** Cad**Function**

Nuclease that induces DNA fragmentation and chromatin condensation during apoptosis. Degrades naked DNA and induces apoptotic morphology.

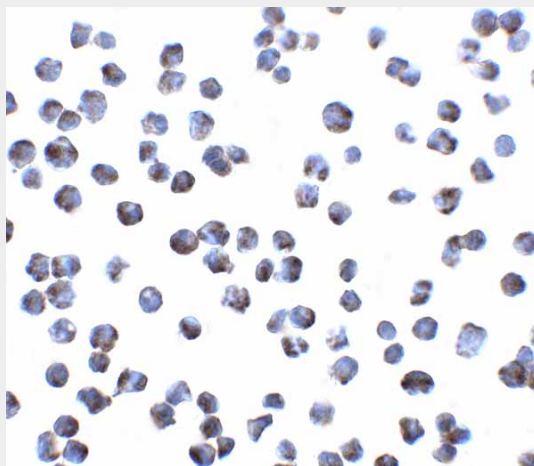
**Cellular Location**

Cytoplasm. Nucleus.

**DFF40 Antibody - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**DFF40 Antibody - Images**

Immunocytochemistry of GPR15 in A431 cells with GPR15 antibody at 5 µg/ml.

**DFF40 Antibody - 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.

**DFF40 Antibody - References**

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

Halenbeck R, MacDonald H, Roulston A, Chen TT, Conroy L, Williams LT. CPAN, a human nuclease regulated by the caspase-sensitive inhibitor DFF45. Curr Biol 1998;8:537-40

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