

### **DFF40 Antibody**

Catalog # ASC10074

### **Specification**

## **DFF40 Antibody - Product Information**

Application Primary Accession Other Accession Reactivity

Host Clonality Isotype

Calculated MW Application Notes WB, ICC, IF 054788

NP 031885, 160948620

Human Rabbit Polyclonal

lgG

40 kDa KDa

DFF40 antibody can be used for detection of DFF40 by Western blot at 0.5 μg/mL. A 40 kDa band can be detected. Antibody can also be used for immunocytochemistry

starting at 5 µg/mL. For

immunofluorescence start at 20 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** 

Dffb:

### **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.



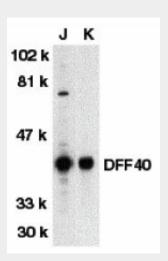
**Cellular Location** Cytoplasm. Nucleus.

# **DFF40 Antibody - Protocols**

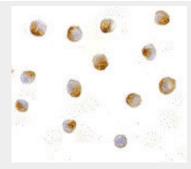
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- <u>Immunohistochemistry</u>
- <u>Immunofluorescence</u>
- <u>Immunoprecipitation</u>
- Flow Cytomety
- Cell Culture

# **DFF40 Antibody - Images**

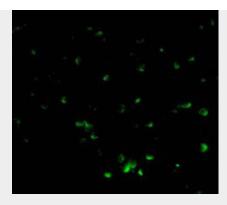


Western blot analysis of DFF40 in Jurkat (J) and K562 (K) whole cell lysate with DFF40 antibody at 1:500 dilution.



Immunocytochemistry of DFF40 in Jurkat cells with DFF40 antibody at 5  $\mu$ g/mL.





Immunofluorescence of DFF40 in Jurkat cells with DFF40 antibody at 20 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