

CAD Antibody
Catalog # ASC10037**Specification**

CAD Antibody - Product Information

Application	IHC, WB
Primary Accession	O54788
Other Accession	O54788 , 13368
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	40 kDa KDa
Application Notes	CAD antibody antibody can be used for detection of CAD by Western blot at 0.5 µg/mL. A 40 kDa band should be detected. Antibody can also be used for immunohistochemistry starting at 5 µg/mL. For immunofluorescence start at 5 µg/mL.

CAD Antibody - Additional InformationGene ID **13368****Other Names**

CAD Antibody: CAD, CPAN, 40kDa, DFF40, Didff, 5730477D02Rik, Cad, DNA fragmentation factor subunit beta, Caspase-activated deoxyribonuclease, CAD, DNA fragmentation factor, beta subunit

Target/Specificity

CAD antibody was raised against a 16 amino acid peptide near the carboxy terminus of murine CAD.

The immunogen is located within the last 50 amino acids of CAD.

Reconstitution & Storage

CAD 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

CAD Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

CAD 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.

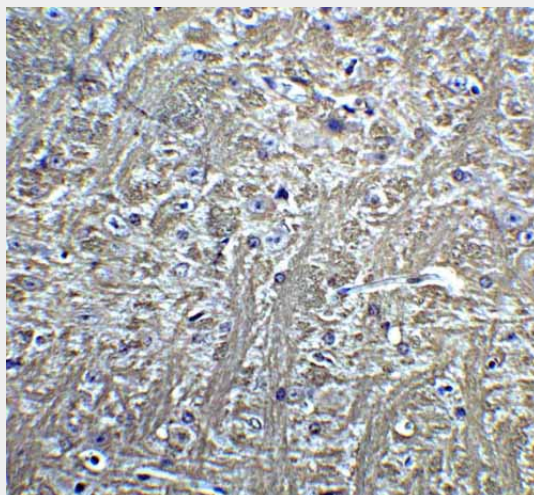
Cellular Location

Cytoplasm. Nucleus.

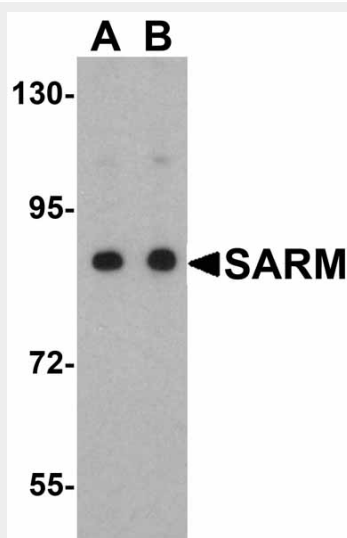
CAD Antibody - Protocols

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](#)

CAD Antibody - Images

Immunohistochemistry of T cadherin in mouse brain tissue with T cadherin Antibody at 5 $\mu\text{g/mL}$.



Western blot analysis of SARM in Daudi cell lysate with SARM antibody at (A) 0.5 and (B) 1 $\mu\text{g/mL}$.

CAD Antibody - Background

CAD 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 two groups independently and termed CPAN and DFF40. Human DFF45 and its mouse homologue ICAD are the inhibitors of CPAN/DFF40 and CAD, respectively. 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 CAD/DFF40, which causes DNA degradation, is the hallmark of apoptotic cell death.

CAD 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
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
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