10320 Camino Santa Fe, Suite G
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CAD Antibody
Catalog # ASC10036

Specification

CAD Antibody - Product Information

Application	**IHC, WB**
Primary Accession	O54788
Other Accession	O54788, 13368
Reactivity	**Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Calculated MW	**40 kDa KDa**
Application Notes	**CAD antibody can be used for detection of CAD by Western blot at 2 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 Information

Gene 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 peptide corresponding to 17 amino acids near the center of murine CAD.

The immunogen is located within amino acids 190 - 240 of CAD.

Reconstitution & Storage
CAD 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
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.

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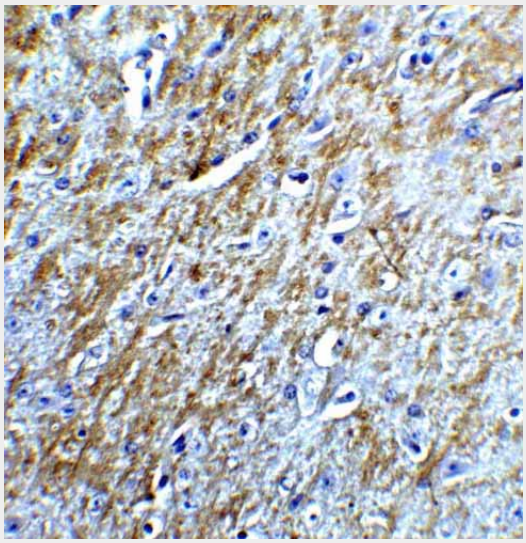
Cellular Location
Cytoplasm. Nucleus.

CAD Antibody - Protocols

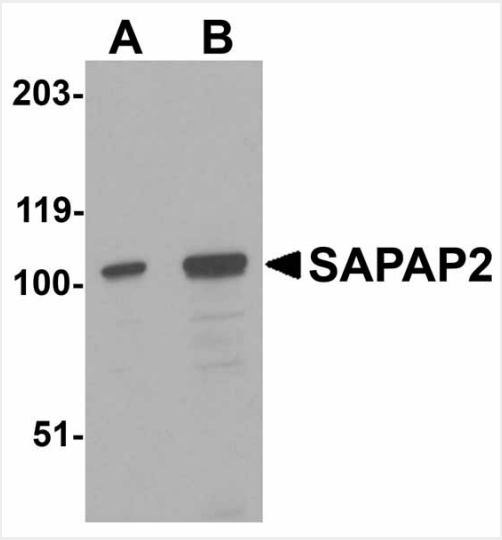
Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CAD Antibody - Images



Immunohistochemistry of Survivin in mouse brain tissue with Survivin Antibodyat 5 µg/mL.



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Western blot analysis of SAPAP2 in Raji cell lysate with SAPAP2 antibody at (A) 0.5 and (B) 1 µg/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