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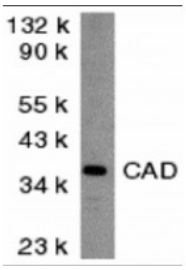
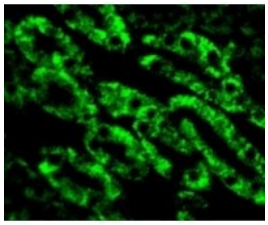
CAD Antibody

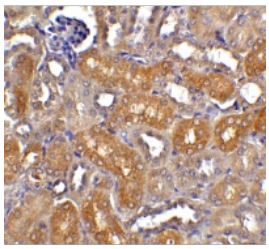
Cat. No.: 2007



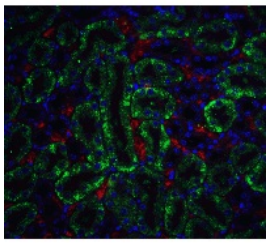
Western blot analysis of CAD in mouse kidney tissue lysate with CAD antibody at 2 ug/mL.



Immunofluorescence of CAD in Mouse Kidney cells with CAD antibody at 10 ug/mL.

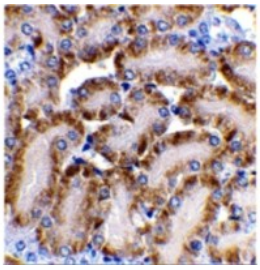


Immunohistochemistry of CAD in mouse kidney tissue with CAD antibody at 5 ug/ml.



Immunofluorescence of CAD in mouse kidney tissue with CAD antibody at 5 ug/ml.

Green: CAD antibody (2007)
Red: Phylloidin staining
Blue: DAPI staining



Immunohistochemistry of CAD in mouse kidney tissue with CAD antibody at 2 ug/mL.

ΨSPECIFICATIONS

HOST SPECIES:	Rabbit
SPECIES REACTIVITY:	Mouse, Rat
HOMOLOGY:	Predicted species reactivity based on immunogen sequence: Human: (83%), Bovine: (78%)
IMMUNOGEN:	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.
TESTED APPLICATIONS:	ELISA, IF, IHC-P, WB
APPLICATIONS:	CAD antibody can be used for detection of CAD by Western blot at 2 ug/mL. A 40 kDa band should be detected. Antibody can also be used for immunohistochemistry starting at 5 ug/mL. For immunofluorescence start at 5 ug/mL. Antibody validated: Western Blot in mouse samples; Immunohistochemistry in mouse samples and Immunofluorescence in mouse samples. All other applications and species not yet tested.
POSITIVE CONTROL:	1) Cat. No. 1405 - Mouse Kidney Tissue Lysate
PREDICTED MOLECULAR WEIGHT:	40 kDa

ΨPROPERTIES

PURIFICATION:	CAD Antibody is affinity chromatography purified via peptide column.
CLONALITY:	Polyclonal
ISOTYPE:	IgG
CONJUGATE:	Unconjugated
PHYSICAL STATE:	Liquid
BUFFER:	CAD Antibody is supplied in PBS containing 0.02% sodium azide.
CONCENTRATION:	batch dependent
STORAGE CONDITIONS:	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.

ΨADDITIONAL INFO

OFFICIAL SYMBOL:	Dffb
ALTERNATE NAMES:	CAD Antibody: CAD, CPAN, 40kDa, DFF40, Didff, 5730477D02Rik, Cad, DNA fragmentation factor subunit beta, Caspase-activated deoxyribonuclease, CAD
ACCESSION NO.:	O54788
PROTEIN GI NO.:	20137695
GENE ID:	13368
USER NOTE:	Optimal dilutions for each application to be determined by the researcher.

ΨBACKGROUND AND REFERENCES

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.
REFERENCES:	1) 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
	2) Sakahira H, Enari M, Nagata S. Cleavage of CAD inhibitor in CAD activation and DNA degradation during apoptosis. Nature 1998;391:96-99
	3) 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
	4) 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