10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

ICAD Antibody

Catalog # ASC10035

Product Information

Application	WB, E
Primary Accession	O54786
Other Accession	O54786, 9087146
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	36572
Conjugate	Unconjugated
Application Notes	ICAD antibody can be used for detection of of ICAD by Western blot at 1:1000 dilution. A 45 kDa band can be detected.

Additional Information

Gene ID	13347
Other Names	ICAD Antibody: ICAD, DFF35, Dff45, ICAD-L, ICAD-S, A330085O09Rik, Icad, DNA fragmentation factor subunit alpha, DNA fragmentation factor 45 kDa subunit, DFF-45, DNA fragmentation factor, alpha subunit
Target/Specificity	Dffa;
Reconstitution & Storage	ICAD 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	ICAD Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Dffa
Synonyms	Icad
Function	Inhibitor of the caspase-activated DNase (DFF40).
Cellular Location	Cytoplasm.

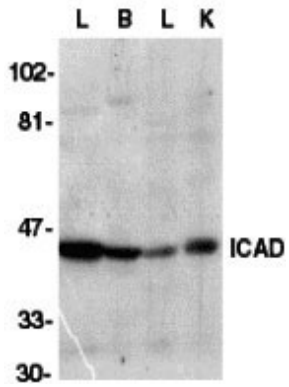
Background

ICAD 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 human DNA fragmentation factor (DFF) was identified recently which was cleaved by caspase-3 during apoptosis. Mouse homologue of human DFF was identified as a DNase inhibitor designated ICAD, for inhibitor of caspase-activated DNase. Upon cleavage of DFF/ICAD, a caspase activated deoxyribonuclease (CAD) is released and activated and eventually causes the degradation of DNA in the nuclei. Therefore, the cleavage of CAD inhibitor molecule DFF/ICAD, which causes DNase activation and DNA degradation, is the hallmark of apoptotic cell death.

References

Liu X, Zou H, Slaughter C, Wang X. DFF, a heterodimeric protein that functions downstream of caspase-3 to trigger DNA fragmentation during apoptosis. Cell 1997;89:175-184
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
Wyllie A. Apoptosis. An endonuclease at last. Nature 1998;39120-21 (RD1299)

Images



Western blot analysis of ICAD in mouse lung (L), brain (B), liver (L), and kidney tissue lysate with CAD antibody at 1:1000 dilution.