

Anti-DFF45 (CT)

CATALOG No.: PX023A SIZE: 100 µg
PX023B SIZE: 0.5 mg

BACKGROUND:

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 45 kDa DNA fragmentation factor (DFF45) was identified recently which was cleaved by caspase-3 during apoptosis (1). Mouse homologue of human DFF45 was identified as a DNase inhibitor designated ICAD (2,3). Upon cleavage of DFF45/ICAD, a caspase activated deoxyribonuclease (DFF40/CAD) is released and activated and eventually causes the degradation of DNA in the nuclei (2-5). Therefore, the cleavage of DFF45/ICAD, which causes DFF40/CAD activation and DNA degradation, is the hallmark of apoptotic cell death.

SOURCE:

Rabbit anti-DFF45 (CT) polyclonal antibody was raised against a peptide corresponding to amino acids 313 to 331 of human DFF45 (1).

APPLICATION:

This polyclonal antibody can be used for detection of DFF45 and one of the cleaved fragments of DFF45 by Western blot (6) at 1:1000 to 1:2000 dilution and for immunoprecipitation. HeLa whole cell lysate can be used as positive control and a 45 kDa band can be detected in non-apoptotic cells. For research use only.

STORAGE:

It is supplied as purified IgG, 100 µg in 200 µl of PBS containing 0.02% sodium azide. Store at 4°C, stable for one year.

Western blot analysis of DFF45 in HeLa (H), Jurkat (J), A431 (A), and K562 (K) whole cell lysate with anti-DFF45 (CT) at 1:1000 dilution.

REFERENCES:

1. 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
2. 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
3. Sakahira H, Enari M, Nagata S. Cleavage of CAD inhibitor in CAD activation and DNA degradation during apoptosis. *Nature* 1998;391:96-99
4. 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
5. Mukae N, Enari M, Sakahira H, Fukuda Y, Inazawa J, Toh H, Nagata S. Molecular cloning and characterization of human caspase-activated DNase. *Proc Natl Acad Sci USA* 1998;95:9123-8
6. Tang D, Kidd VJ. Cleavage of DFF-45/ICAD by multiple caspases is essential for its function during apoptosis. *J Biol Chem* 1998;273:28549-52

CAUTION: NOT FOR USE IN HUMANS. FOR RESEARCH PURPOSES ONLY.



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