

Anti-FLIP γ/δ , C-Terminal

produced in rabbit, affinity isolated antibody

Catalog Number **F9925**

Synonyms: Anti-CLARP; Anti-CASH; Anti-FLAME-1; Anti-I-FLICE

Product Description

Anti-FLIP γ/δ , C-Terminal is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 191-209 of the C-terminal of human FLIP δ /FLIP γ .¹

Anti-FLIP γ/δ , C-Terminal detects FLIP γ (35 kDa) and FLIP δ /FLIP γ (25 kDa) by immunoblotting. The antibody reacts with human and mouse FLIP γ/δ .

Apoptosis plays an important role in tissue homeostasis and is related to many diseases. The death receptors induce apoptosis after triggering with ligand or agonistic antibodies.² The best-characterized member of the death receptor subfamily is CD95 (APO-1, Fas). Stimulation of CD95 leads to clustering of the receptor. This enables the adapter molecule FADD/MORT1^{3,4} and the death protease caspase-8 (FLICE, MACH, MCH5),⁵⁻⁷ to bind to the receptor via homophilic death domain and death effector domain (DED) interactions, respectively, forming the death-inducing signaling complex (DISC).⁸ Recruitment of caspase-8 to the DISC leads to its proteolytic activation, which initiates a cascade of caspases, leading to apoptosis.⁹

Viral FLICE-inhibitory proteins (v-FLIPs)¹⁰⁻¹² are composed of two death effector domains, a structure resembling the N-terminal half of caspase-8. Via DED-DED interaction, v-FLIPs are recruited to the CD95 DISC,¹⁰ preventing caspase-8 recruitment and processing and thereby CD95-induced apoptosis.

Human FLIP was identified by different groups and termed c-FLIP,¹ CASH,¹³ Casper,¹⁴ CLARP,¹⁵ FLAME,¹⁶ I-FLICE,¹⁷ MRIT¹⁸ and Usurpin.¹⁹ On the mRNA level, c-FLIP seems to exist as multiple splice variants, FLIP α , β , γ and δ , respectively.^{20,21} Only two endogenous forms of the protein have been detected, c-FLIP_{long} and c-FLIP_{short}.^{13,14,19} c-FLIP is structurally similar to caspase-8, since it contains two death effector domains and a caspase-like domain. However, this domain lacks residues that are important for its catalytic activity, most notably the cysteine within the active site. The short form of c-FLIP structurally

resembles v-FLIP. The role of c-FLIP in apoptosis signaling may be as pro-apoptotic molecule^{13,14,15,18} or as an anti-apoptotic molecule.^{1, 13,14,16,17,19} In addition, whether c-FLIP interacts with FADD and/or caspase-8 is not clear. Some groups have reported that c-FLIP can interact with both FADD and caspase-8,^{1, 13,14,16,18} while others could only detect an interaction between c-FLIP and caspase-8.^{15,17,19}

Reagent

Solution in 0.01M phosphate buffered saline, containing 0.02% sodium azide.

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Antibody can be stored at 2-8 °C for three months and at -20 °C for 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.

Product Profile

Immunoblotting: the recommended dilution is 1:1000. A Jurkat (human T lymphocyte) cell lysate may be used as a positive control. Both 35 kDa and 25 kDa bands are detected.

Immunocytochemistry: 2ug/mL

Immunofluorescence: 10 ug/mL

Note: In order to obtain best results and assay sensitivities of different techniques and preparations, we recommend determining optimal working dilutions by titration test.

References

1. Irmiler, M., et al., *Nature*, **388**,190-195 (1997).
2. Peter, M. E., et al., in *Apoptosis: Problems and Diseases* (Kumar, S., ed), Springer, Heidelberg pp. 25-63, (1998).

3. Boldin, M. P., et al., *J. Biol. Chem.*, **270**, 7795-7798 (1995).
4. Chinnaiyan, A. M., et al., *Cell*, **81**, 505-512 (1995).
5. Muzio, M., et al., *Cell*, **85**, 817-827 (1996).
6. Boldin, M. P., et al., *Cell*, **85**, 803-815 (1996)
7. Srinivasula, S. M., et al., *Proc. Natl. Acad. Sci. USA*, **93**, 14486-14491 (1996).
8. Kischkel, F. C., et al., *EMBO J.*, **14**, 5579-5588 (1995)
9. Medema, J. P., et al., *EMBO J.*, **16**, 2794-2804 (1997).
10. Thome, M., et al., *Nature*, **386**, 517-521 (1997).
11. Hu, S., et al., *J. Biol. Chem.*, **272**, 9621-9624 (1997).
12. Bertin, J., et al., *Proc. Natl. Acad. Sci. USA*, **94**, 1172-1176 (1997).
13. Goltsev, Y.V., et al., *J. Biol. Chem.*, **272**:19641-19644 (1997).
14. Shu, H. B., et al., *Immunity*, **6**, 751-763 (1997)
15. Inohara, N., et al., *Proc. Natl. Acad. Sci. USA*, **94**, 10717-10722 (1997).
16. Srinivasula, S. M., et al., *J. Biol. Chem.*, **272**, 18542-18545 (1997).
17. Hu, S., et al., *J. Biol. Chem.*, **272**, 17255-17257 (1997).
18. Han, D. K., et al., *Proc. Natl. Acad. Sci. USA*, **94**, 11333-11338 (1997).
19. Dita, R. M., et al., *Cell Death Differ.*, **5**, 271-288 (1998).
20. Wallach, D., *Nature*, **388**, 123 (1997).
21. Tschopp, J., et al., *Curr. Opin. Immunol.*, **10**, 552-558 (1998).

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