SANTA CRUZ BIOTECHNOLOGY, INC.

TRADD (51-328): sc-4253 WB



BACKGROUND

In contrast to growth factors which promote cell proliferation, FAS ligand (FAS-L) and the tumor necrosis factors (TNFs) rapidly induce apoptosis. Cellular response to FAS-L and TNF is mediated by structurally related receptors containing a conserved "death domain" and belonging to the TNF receptor superfamily. TRADD, FADD and RIP are FAS/TNF-R1 interacting proteins that contain a death domain homologous region (DDH). TRADD (TNF-R1-associated death domain) and FADD (FAS-associated death domain) are 34 kDa and 23 kDa proteins, respectively, that associate with the death domains of both FAS and TNF-R1 via their DDH regions. Overexpression of TRADD leads to NFkB activation and apoptosis in the absence of TNF. Overexpression of FADD causes apoptosis, which can be blocked by the cow pox protein CrmA, suggesting that FADD lies upstream of ICE and possibly other serine proteases. The 74 kDa receptor interacting protein, RIP, associates with FAS exclusively via its DDH and this association is abrogated in lpr mutants. Unlike TRADD and FADD, RIP contains a putative amino terminal kinase domain.

REFERENCES

- Smith, C.A., Farrah, T., and Goodwin, R.G. 1994. The TNF receptor superfamily of cellular and viral proteins: activation, costimulation and death. Cell 76: 959-962.
- 2. Nagata, S. and Golstein, P. 1995. The Fas death factor. Science 267: 1449-1456.
- Sato, T., Irie, S., Kitada, S., and Reed, J.C. 1995. FAP-1: a protein tyrosine phosphatase that associates with Fas. Science 268: 411-414.
- Cleveland, J.L. and Ihle, J.N. 1995. Contenders in FasL/TNF death signaling. Cell 81: 479-482.
- Hsu, H., Xiong, J., and Goeddel, D.V. 1995. The TNF receptor 1-associated protein TRADD signals cell death and NFκB activation. Cell 81: 495-504.
- Chinnaiyan, A.M., O'Rourke, K., Tewari, M., and Dixit, V.M. 1995. FADD, a novel death domain-containing protein, interacts with the death domain of Fas and initiates apoptosis. Cell 81: 505-512.
- Stanger, B.Z., Leder, P., Lee, T.-H., Kim, E., and Seed, B. 1995. RIP: a novel protein containing a death domain that interacts with Fas/APO-1 (CD95) in yeast and causes cell death. Cell 81: 513-523.
- Baker, S.J. and Reddy, E.P. 1996. Transducers of life and death: TNF receptor superfamily and associated proteins. Oncogene 12: 1-9.

SOURCE

TRADD (51-328) is expressed in *E. coli* as a 58 kDa tagged fusion protein corresponding to amino acids 51-328 of TRADD of human origin.

PRODUCT

TRADD (51-328) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 μ g in 0.1 ml SDS-PAGE loading buffer.

APPLICATIONS

TRADD (51-328) is suitable as a Western blotting control for sc-1163, sc-1164 and sc-7868.

STORAGE

Store at -20° C; stable for one year from the date of shipment.

RESEARCH USE

For research use only, not for use in diagnostic procedures.