SANTA CRUZ BIOTECHNOLOGY, INC.

FADD (G-4): sc-271748

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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) associate with the death domains of both FAS and TNF-R1 via their DDH regions. Overexpression of TRADD leads to NFκB activation and apoptosis in the absence of TNF. Overexpression of FADD causes apoptosis, which can be blocked by the bovine pox protein CrmA, suggesting that FADD lies upstream of ICE and possibly other serine proteases. The 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.

CHROMOSOMAL LOCATION

Genetic locus: FADD (human) mapping to 11q13.3; Fadd (mouse) mapping to 7 F5.

SOURCE

FADD (G-4) is a mouse monoclonal antibody raised against amino acids 28-209 mapping at the C-terminus of FADD of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FADD (G-4) is available conjugated to agarose (sc-271748 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271748 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271748 PE), fluorescein (sc-271748 FITC), Alexa Fluor® 488 (sc-271748 AF488), Alexa Fluor® 546 (sc-271748 AF546), Alexa Fluor® 594 (sc-271748 AF594) or Alexa Fluor® 647 (sc-271748 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271748 AF680) or Alexa Fluor® 790 (sc-271748 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

FADD (G-4) is recommended for detection of FADD of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for FADD siRNA (h): sc-35352, FADD siRNA (m): sc-35351, FADD shRNA Plasmid (h): sc-35352-SH, FADD shRNA Plasmid (m): sc-35351-SH, FADD shRNA (h) Lentiviral Particles: sc-35352-V and FADD shRNA (m) Lentiviral Particles: sc-35351-V.

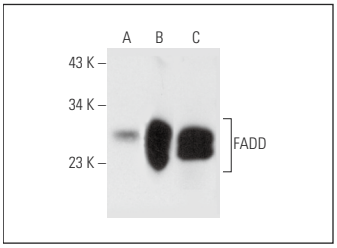
Molecular Weight of FADD: 27 kDa.

Positive Controls: FADD (m2): 293T Lysate: sc-126822.

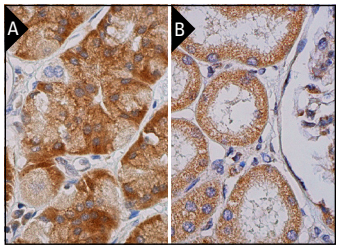
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



FADD (G-4): sc-271748. Western blot analysis of FADD expression in non-transfected 293T: sc-117752 (**A**), mouse FADD transfected 293T: sc-126822 (**B**) and A-431 (**C**) whole cell lysates.



FADD (G-4): sc-271748. Immunoperoxidase staining of formalin fixed, paraffin-embedded human upper stomach tissue showing cytoplasmic staining of glandular cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in glomeruli (**B**).

SELECT PRODUCT CITATIONS

1. Guan, Y.J., et al. 2011. Phospho-SXXE/D motif mediated TNF receptor 1-TRADD death domain complex formation for T cell activation and migration. J. Immunol. 187: 1289-1297.
2. Cheng, W., et al. 2012. Regulation of protein kinase C inactivation by FAS-associated protein with death domain. J. Biol. Chem. 287: 26126-26135.
3. Kharaziha, P., et al. 2015. Sorafenib-induced defective autophagy promotes cell death by necroptosis. Oncotarget 6: 37066-37082.
4. Carnino, J.M., et al. 2020. Extracellular vesicle-cargo miR-185-5p reflects type II alveolar cell death after oxidative stress. Cell Death Discov. 6: 82.
5. Wang, J., et al. 2021. Ceritinib increases sensitivity of Akt inhibitors to gastric cancer. Eur. J. Pharmacol. 896: 173879.
6. Gomez-Diaz, C., et al. 2021. The ubiquitin ligase HOIL-1L regulates immune responses by interacting with linear ubiquitin chains. iScience 24: 103241.
7. Gil, H.S., et al. 2021. AKF-D52, a synthetic phenoxypyrimidine-urea derivative, triggers extrinsic/intrinsic apoptosis and cytoprotective autophagy in human non-small cell lung cancer cells. Cancers 13: 5849.
8. Chun, N., et al. 2021. T cell-derived tumor necrosis factor induces cytotoxicity by activating RIPK1-dependent target cell death. JCI Insight 6: e148643.
9. Bolik, J., et al. 2022. Inhibition of ADAM17 impairs endothelial cell necroptosis and blocks metastasis. J. Exp. Med. 219: e20201039.
10. Corsetti, G., et al. 2022. Essential amino acids-rich diet decreased adipose tissue storage in adult mice: a preliminary histopathological study. Nutrients 14: 2915.

RESEARCH USE

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