SANTA CRUZ BIOTECHNOLOGY, INC.

FADD (H-10): sc-271520

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.

SOURCE

FADD (H-10) 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_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

RESEARCH USE

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

APPLICATIONS

FADD (H-10) is recommended for detection of FADD of 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) 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 shRNA Plasmid (h): sc-35352-SH and FADD shRNA (h) Lentiviral Particles: sc-35352-V.

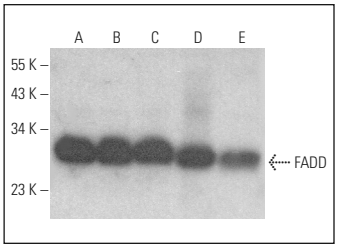
Molecular Weight of FADD: 27 kDa.

Positive Controls: SW480 cell lysate: sc-2219, HeLa whole cell lysate: sc-2200 or A-431 whole cell lysate: sc-2201.

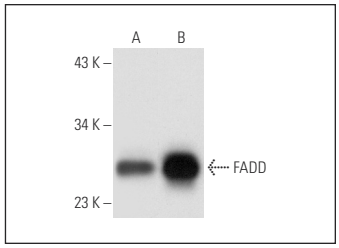
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



FADD (H-10): sc-271520. Western blot analysis of FADD expression in Jurkat (**A**), HeLa (**B**) and SK-BR-3 (**C**) whole cell lysates and human kidney (**D**) and human stomach (**E**) tissue extracts.



FADD (H-10): sc-271520. Western blot analysis of FADD expression in SW480 (**A**) and A-431 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Zhu, X., et al. 2016. Ziyuglycoside I inhibits the proliferation of MDA-MB-231 breast carcinoma cells through inducing p53-mediated G_2/M cell cycle arrest and intrinsic/extrinsic apoptosis. Int. J. Mol. Sci. 17: 1903.
2. Xu, L., et al. 2017. DR5-Cbl-b/c-Cbl-TRAF2 complex inhibits TRAIL-induced apoptosis by promoting TRAF2-mediated polyubiquitination of caspase-8 in gastric cancer cells. Mol. Oncol. 11: 1733-1751.
3. Iurlaro, R., et al. 2017. Glucose deprivation induces ATF4-mediated apoptosis through TRAIL death receptors. Mol. Cell. Biol. 37: e00479-16.
4. Kumari, R., et al. 2019. Caspase-10 inhibits ATP-citrate lyase-mediated metabolic and epigenetic reprogramming to suppress tumorigenesis. Nat. Commun. 10: 4255.
5. Jing, L., et al. 2019. CNOT3 contributes to cisplatin resistance in lung cancer through inhibiting RIPK3 expression. Apoptosis 24: 673-685.
6. Xiang, L., et al. 2020. Antitumor effects of curcumin on the proliferation, migration and apoptosis of human colorectal carcinoma HCT-116 cells. Oncol. Rep. 44: 1997-2008.
7. Xu, H., et al. 2022. Rosin derivative IDOAMP inhibits prostate cancer growth via activating RIPK1/RIPK3/MLKL signaling pathway. Oxid. Med. Cell. Longev. 2022: 9325973.

CONJUGATES

See **FADD (G-4): sc-271748** for FADD antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.