SANTA CRUZ BIOTECHNOLOGY, INC.

TRADD (A-5): sc-46653

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: TRADD (human) mapping to 16q22.1.

SOURCE

TRADD (A-5) is a mouse monoclonal antibody raised against amino acids 35-312 mapping at the C-terminus of TRADD 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.

TRADD (A-5) is available conjugated to agarose (sc-46653 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-46653 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-46653 PE), fluorescein (sc-46653 FITC), Alexa Fluor® 488 (sc-46653 AF488), Alexa Fluor® 546 (sc-46653 AF546), Alexa Fluor® 594 (sc-46653 AF594) or Alexa Fluor® 647 (sc-46653 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-46653 AF680) or Alexa Fluor® 790 (sc-46653 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

TRADD (A-5) is recommended for detection of TRADD 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), 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 TRADD siRNA (h): sc-36709, TRADD shRNA Plasmid (h): sc-36709-SH and TRADD shRNA (h) Lentiviral Particles: sc-36709-V.

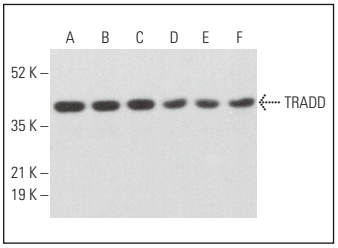
Molecular Weight of TRADD: 34 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, HL-60 whole cell lysate: sc-2209 or K-562 whole cell lysate: sc-2203.

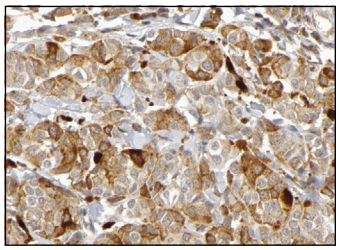
STORAGE

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

DATA



TRADD (A-5): sc-46653. Western blot analysis of TRADD expression in HL-60 (**A**), K-562 (**B**), HeLa (**C**), Ramos (**D**), BJAB (**E**) and Jurkat (**F**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



TRADD (A-5): sc-46653. Immunoperoxidase staining of formalin fixed, paraffin-embedded human malignant melanoma showing cytoplasmic and membrane staining of tumor cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Geering, B., et al. 2011. A novel TNFR1-triggered apoptosis pathway mediated by class IA PI3Ks in neutrophils. Blood 117: 5953-5962.
2. Huang, Y., et al. 2012. UXT-V1 facilitates the formation of MAVS antiviral signalosome on mitochondria. J. Immunol. 188: 358-366.
3. Gaud, G., et al. 2013. EVER2 protein binds TRADD to promote TNF-α-induced apoptosis. Cell Death Dis. 4: e499.
4. Huang, Y., et al. 2014. MAVS-MKK7-JNK2 defines a novel apoptotic signaling pathway during viral infection. PLoS Pathog. 10: e1004020.
5. Nakazawa, S., et al. 2016. Linear ubiquitination is involved in the pathogenesis of optineurin-associated amyotrophic lateral sclerosis. Nat. Commun. 7: 12547.
6. Willemsen, J., et al. 2017. Phosphorylation-dependent feedback inhibition of RIG-I by DAPK1 identified by kinome-wide siRNA screening. Mol. Cell 65: 403-415.e8.
7. Wang, L., et al. 2020. TRADD mediates RIPK1-independent necroptosis induced by tumor necrosis factor. Front. Cell Dev. Biol. 7: 393.
8. Sp, N., et al. 2020. Tannic acid promotes TRAIL-induced extrinsic apoptosis by regulating mitochondrial ROS in human embryonic carcinoma cells. Cells 9: 282.
9. Meng, H., et al. 2021. Discovery of a cooperative mode of inhibiting RIPK1 kinase. Cell Discov. 7: 41.
10. Zhang, N., et al. 2021. Structural basis of NFκB signaling by the p75 neurotrophin receptor interaction with adaptor protein TRADD through their respective death domains. J. Biol. Chem. 297: 100916.

RESEARCH USE

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