SANTA CRUZ BIOTECHNOLOGY, INC.

EDAR (G-1): sc-271627

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The tumor necrosis factor receptor (TNFR) superfamily represents a growing family of type I transmembrane glycoproteins that are involved in various cellular functions, including proliferation, differentiation and programmed cell death. These proteins share homology for cysteine-rich repeats in the extracellular ligand binding domain and the intracellular death domain. Members of the TNFR superfamily transmit signals through protein-protein interactions, and these signals can lead to the activation of either the caspase and Jun kinase pathways, which promote cell death, or the NFκB pathway, which results in cell survival. The ectodermal dysplasia receptor (EDAR) promotes all three of these pathways and mediates ectodermal differentiation. EDAR is encoded by the downless gene and is mutated in ectodermal dysplasia syndromes, which are characterized by impaired hair, teeth and sweat gland development. Ectodysplasin A (EDA) is a type II membrane protein that is encoded by the Tabby gene and produces many splice variants, the longest of which, EDA-A1, serves as the ligand for EDAR. EDA-A2, which differs from EDA-A1 by the deletion of two amino acids, binds only the X-linked ectodysplasin-A2 receptor (XEDAR). Both EDAR and XEDAR exhibit homology with TROY.

CHROMOSOMAL LOCATION

Genetic locus: EDAR (human) mapping to 2q12.3; Edar (mouse) mapping to 10 B4.

SOURCE

EDAR (G-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 415-448 at the C-terminus of EDAR 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.

EDAR (G-1) is available conjugated to agarose (sc-271627 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271627 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271627 PE), fluorescein (sc-271627 FITC), Alexa Fluor® 488 (sc-271627 AF488), Alexa Fluor® 546 (sc-271627 AF546), Alexa Fluor® 594 (sc-271627 AF594) or Alexa Fluor® 647 (sc-271627 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271627 AF680) or Alexa Fluor® 790 (sc-271627 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271627 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

EDAR (G-1) is recommended for detection of EDAR 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for EDAR siRNA (h): sc-40239, EDAR siRNA (m): sc-40240, EDAR shRNA Plasmid (h): sc-40239-SH, EDAR shRNA Plasmid (m): sc-40240-SH, EDAR shRNA (h) Lentiviral Particles: sc-40239-V and EDAR shRNA (m) Lentiviral Particles: sc-40240-V.

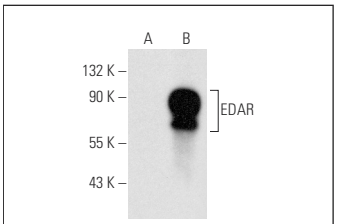
Molecular Weight of EDAR: 49 kDa.

Positive Controls: EDAR (h): 293T Lysate: sc-177166.

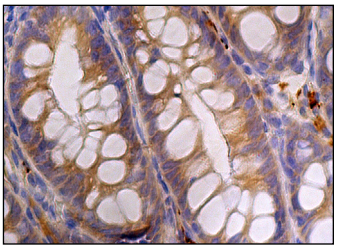
RECOMMENDED SUPPORT REAGENTS

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



EDAR (G-1): sc-271627. Western blot analysis of EDAR expression in non-transfected: sc-117752 (**A**) and human EDAR transfected: sc-177166 (**B**) 293T whole cell lysates.



EDAR (G-1): sc-271627. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Alexander-Savino, C.V., et al. 2016. Doxycycline is an NF-κB inhibitor that induces apoptotic cell death in malignant T-cells. Oncotarget. 7: 75954-75967.
2. Vial, J., et al. 2019. The Ectodysplasin receptor EDAR acts as a tumor suppressor in melanoma by conditionally inducing cell death. Cell Death Differ. 26: 443-454.

RESEARCH USE

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