

XEDAR (H-78): sc-366134

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 an 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 NF κ B 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.

REFERENCES

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2. Gruss, H.J., et al. 1996. Structural and biological features of the TNF receptor and TNF ligand superfamilies: interactive signals in the pathobiology of Hodgkin's disease. *Ann. Oncol.* 7: 19-26.
3. Baker, S.J., et al. 1998. Modulation of life and death by the TNF receptor superfamily. *Oncogene* 17: 3261-3270.
4. Tucker, A.S., et al. 2000. Edar/Eda interactions regulate enamel knot formation in tooth morphogenesis. *Development* 127: 4691-4700.
5. Yan, M., et al. 2000. Two-amino acid molecular switch in an epithelial morphogen that regulates binding to two distinct receptors. *Science* 290: 523-527.
6. Kojima, T., et al. 2000. TROY, a newly identified member of the tumor necrosis factor receptor superfamily, exhibits a homology with Edar and is expressed in embryonic skin and hair follicles. *J. Biol. Chem.* 275: 20742-20747.
7. Kumar, A., et al. 2001. The ectodermal dysplasia receptor activates the nuclear factor- κ B, JNK, and cell death pathways and binds to ectodysplasin A. *J. Biol. Chem.* 276: 2668-2677.
8. Elomaa, O., et al. 2001. Ectodysplasin is released by proteolytic shedding and binds to the EDAR protein. *Hum. Mol. Genet.* 10: 953-962.

CHROMOSOMAL LOCATION

Genetic locus: EDA2R (human) mapping to Xq12; Eda2r (mouse) mapping to X C3.

SOURCE

XEDAR (H-78) is a rabbit polyclonal antibody raised against amino acids 220-297 mapping at the C-terminus of XEDAR of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

XEDAR (H-78) is recommended for detection of XEDAR of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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 XEDAR siRNA (h): sc-40249, XEDAR siRNA (m): sc-40250, XEDAR shRNA Plasmid (h): sc-40249-SH, XEDAR shRNA Plasmid (m): sc-40250-SH, XEDAR shRNA (h) Lentiviral Particles: sc-40249-V and XEDAR shRNA (m) Lentiviral Particles: sc-40250-V.

Molecular Weight of XEDAR: 37 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.



Try **XEDAR (G-5): sc-377423**, our highly recommended monoclonal alternative to XEDAR (H-78).