

EDAR (h): 293T Lysate: sc-177166

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 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

1. Gruss, H.J. 1996. Molecular, structural, and biological characteristics of the tumor necrosis factor ligand superfamily. *Int. J. Clin. Lab. Res.* 26: 143-159.
3. 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.
4. Baker, S.J., et al. 1998. Modulation of life and death by the TNF receptor superfamily. *Oncogene* 17: 3261-3270.
5. Tucker, A.S., et al. 2000. EDAR/EDA interactions regulate enamel knot formation in tooth morphogenesis. *Development* 127: 4691-4700.
6. 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.
7. 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.
8. 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.
9. 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: EDAR (human) mapping to 2q13.

PRODUCT

EDAR (h): 293T Lysate represents a lysate of human EDAR transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

EDAR (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive EDAR antibodies. Recommended use: 10-20 μ l per lane.

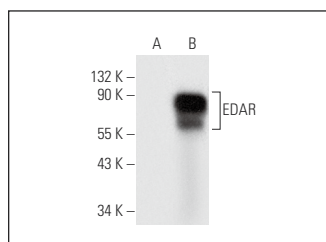
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

EDAR (H-7): sc-271652 is recommended as a positive control antibody for Western Blot analysis of enhanced human EDAR expression in EDAR transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

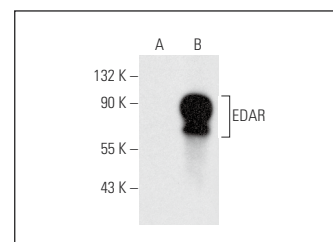
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ 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.

DATA



EDAR (H-7): sc-271652. 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. Western blot analysis of EDAR expression in non-transfected: sc-117752 (A) and human EDAR transfected: sc-177166 (B) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.