

## EDAR (E-19): sc-15289

### 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 $\kappa$ 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.
2. Gruss, H.J., et al. 1996. Structural and biological features of the TNF receptor and TNF ligand superfamilies: interactive signals in the pathology 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. 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.

### CHROMOSOMAL LOCATION

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

### SOURCE

EDAR (E-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of EDAR of human origin.

### 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.

### PRODUCT

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

Blocking peptide available for competition studies, sc-15289 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

EDAR (E-19) is recommended for detection of EDAR of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

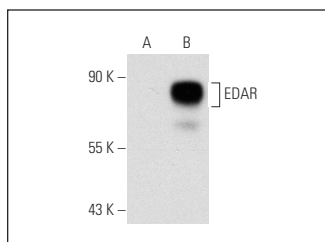
EDAR (E-19) is also recommended for detection of EDAR in additional species, including equine, canine, bovine, porcine and avian.

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.

### DATA



EDAR (E-19): sc-15289. Western blot analysis of EDAR expression in non-transfected: sc-117752 (A) and human EDAR transfected: sc-177166 (B) 293T whole cell lysates.

### SELECT PRODUCT CITATIONS

1. Trompouki, E., et al. 2003. CYLD is a deubiquitinating enzyme that negatively regulates NF $\kappa$ B activation by TNFR family members. *Nature* 424: 793-796.



Try **EDAR (G-1): sc-271627** or **EDAR (F-5): sc-398337**, our highly recommended monoclonal alternatives to EDAR (E-19).