

## Active Recombinant Human EDAR, Fc-tagged

Cat. No. EDAR-231H    Lot. No. (See product label)

### SPECIFICATION

#### Product Overview

The extracellular domain of human EDAR (aa 27-183) is fused at the C-terminus to the Fc portion of human IgG1.

#### Species

Human

#### Source

CHO

#### ProteinLength

27-183 a.a.

#### Description

The TNF family ligand ectodysplasin A (EDA) and its receptor EDAR are required for proper development of skin appendages such as hair, teeth and eccrine sweat glands. Loss of function mutations in the Eda gene cause X-linked hypohidrotic ectodermal dysplasia (XLHED), a condition that can be ameliorated in mice and dogs by timely administration of recombinant EDA. The Eda gene on the X chromosome is transcribed as multiple splice variants, only two of which code for the receptor-binding C-terminal TNF homology domain. These two variants code for 391- and 389-amino acid-long proteins called EDA1 and EDA2. EDA1 binds EDAR, whereas EDA2 binds to another receptor, XEDAR. The biology of EDA2 and XEDAR is distinct from that of EDA1. Indeed, XEDAR-deficient mice have no obvious ectodermal dysplasia phenotype, whereas mice deficient in EDA, EDAR, or the signaling adaptor protein EDARADD all display virtually indistinguishable ectodermal dysplasia phenotypes, indicating the predominance of the EDA1-EDAR axis in the development of skin-derived appendages.

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|                       |                                                                                                                                                                                                                 |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Form</b>           | Lyophilized. Contains PBS.                                                                                                                                                                                      |
| <b>Bio-activity</b>   | Inhibits EDA-A1 activity.                                                                                                                                                                                       |
| <b>Molecular Mass</b> | ~50kDa (SDS-PAGE)                                                                                                                                                                                               |
| <b>Purity</b>         | ≥95% (SDS-PAGE)                                                                                                                                                                                                 |
| <b>Stability</b>      | Stable for at least 6 months after receipt when stored at -20°C.                                                                                                                                                |
| <b>Storage</b>        | Short Term Storage: +4°C; Long Term Storage: -20°C. After reconstitution, prepare aliquots and store at -20°C. Avoid freeze/thaw cycles. PBS containing at least 0.1% BSA should be used for further dilutions. |
| <b>Concentration</b>  | 1mg/ml after reconstitution.                                                                                                                                                                                    |

## GENE INFORMATION

|                        |                                                                                                                                                                                                                                                                                                                                                                                                             |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Gene Name</b>       | EDAR ectodysplasin A receptor [ Homo sapiens ]                                                                                                                                                                                                                                                                                                                                                              |
| <b>Official Symbol</b> | EDAR                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Synonyms</b>        | EDAR; ectodysplasin A receptor; DL, ectodysplasin 1, anhidrotic receptor , ED3; tumor necrosis factor receptor superfamily member EDAR; ED1R; ED5; EDA1R; EDA3; Edar; EDA-A1 receptor; downless homolog; ectodysplasin-A receptor; downless, mouse, homolog of; ectodermal dysplasia receptor; anhidrotic ectodysplasin receptor 1; ectodysplasin 1, anhidrotic receptor; DL; ED3; HRM1; EDA-A1R; FLJ94390; |
| <b>Gene ID</b>         | 10913                                                                                                                                                                                                                                                                                                                                                                                                       |

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|                            |                                                                                                                                   |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| <b>mRNA Refseq</b>         | NM_022336                                                                                                                         |
| <b>Protein Refseq</b>      | NP_071731                                                                                                                         |
| <b>MIM</b>                 | 604095                                                                                                                            |
| <b>UniProt ID</b>          | Q9UNE0                                                                                                                            |
| <b>Chromosome Location</b> | 2q13                                                                                                                              |
| <b>Pathway</b>             | Cytokine-cytokine receptor interaction, organism-specific biosystem; Cytokine-cytokine receptor interaction, conserved biosystem; |
| <b>Function</b>            | protein binding; receptor activity; transmembrane signaling receptor activity;                                                    |

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