

## EDA2R Protein, Rat, Recombinant (His)

### General Information

Synonyms: ectodysplasin A2 receptor

Protein Construction: A DNA sequence encoding the rat EDA2R (D3ZAX4) (Met2-Glu137) was expressed, fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Met 2

Species: Rat

Expression Host: HEK293 Cells

Accession: D3ZAX4

Molecular Weight: 16.7 kDa (predicted); 27 kDa (reducing condition, due to glycosylation)

### QC Testing

Biological Activity: Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.

Purity: > 90 % as determined by SDS-PAGE

Endotoxin: < 1.0 EU/μg of the protein as determined by the LAL method.

Formulation: Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

#### Shipping:

In general, Lyophilized powders are shipping with blue ice.

### Protein Background

Tumor necrosis factor receptor superfamily member 27, also known as X-linked ectodysplasin-A2 receptor, EDA-A2 receptor, EDA2R, XEDAR and TNFRSF27, is a single-pass type III membrane protein. TNFRSF27 / EDA2R contains three TNFR-Cys repeats. It is a new member of the tumor necrosis factor receptor family that has been shown to be highly expressed in ectodermal derivatives during embryonic development and binds to ectodysplasin-A2 (EDA-A2). TNFRSF27 / EDA2R is a receptor for EDA isoform A2, but not for EDA isoform A1.

TNFRSF27 / EDA2R mediates the activation of the NF-kappa-B and JNK pathways. The activation seems to be mediated by binding to TRAF3 and TRAF6. Ectodysplasin, a member of the tumor necrosis factor family, is encoded by the anhidrotic ectodermal dysplasia EDA gene. Mutations in EDA give rise to a clinical syndrome characterized by loss of hair, sweat glands, and teeth. EDA-A1 and EDA-A2 are two isoforms of ectodysplasin that differ only by an insertion of two amino acids. This insertion functions to determine receptor binding specificity, such that EDA-A1 binds only the receptor EDAR, whereas EDA-A2 binds only the related, but distinct, X-linked ectodysplasin-A2 receptor (XEDAR).

Reference

Yan M., et al., 2000, *Science*. 290: 523-527.  
Sinha S.K., et al., 2002, *J. Biol. Chem.* 277: 44953-44961.  
Prodi, D.A. et al., 2008, *J Invest Dermatol* 128 (9):2268-70.

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