Data Sheet (Cat.No.TMPY-01636)

TargetMol

EDAR Protein, Human, Recombinant (hFc)

General Information

Synonyms:	DL;EDA1R;ED5;EDA3;ED3;HRM1;ectodysplasin A receptor;EDA-A1R;ECTD10B;ED1R;ECTD10A
Protein Construction:	A DNA sequence encoding the human EDAR (NP_071731.1) extracellular domain (Met 1-Ile 189) was fused with the Fc region of human IgG1 at the C-terminus. Predicted N terminal: Glu 27
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q9UNE0-1
Molecular Weight:	44.6 kDa (predicted); 52 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:	> 96 % 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.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Tumor necrosis factor receptor superfamily member EDAR is a Single-pass type I membrane protein. Edar was expressed reiteratively in signaling centers regulating key steps in morphogenesis. activin signaling from mesenchyme induces the expression of the TNF receptor edar in the epithelial signaling centers, thus making them responsive to Wnt-induced ectodysplasin from the nearby ectoderm. This is the first demonstration of integration

of the Wnt, activin, and TNF signaling pathways. Defects in EDAR are a cause of ectodermal dysplasia anhidrotic (EDA), also known ectodermal dysplasia hypohidrotic autosomal recessive (HED). Ectodermal dysplasia defines a heterogeneous group of disorders due to abnormal development of two or more ectodermal structures. EDA is characterized by sparse hair (atrichosis or hypotrichosis), abnormal or missing teeth and the inability to sweat due to the absence of sweat glands.

Reference

Elomaa O, et al. (2001) Ectodysplasin is released by proteolytic shedding and binds to the EDAR protein. Hum Mol Genet. 10 (9): 953-62.

Koppinen P, et al. (2001) Signaling and subcellular localization of the TNF receptor Edar. Exp Cell Res. 269 (2): 180-92.

Chassaing N, et al. (2006) Mutations in EDAR account for one-quarter of non-ED1-related hypohidrotic ectodermal dysplasia. Hu. Mutat. 27 (3): 255-9.