Recombinant Human EDA-A2/Ectodysplasin A2

Catalog Number: 922-ED

DESCRIPTION

Source Mouse myeloma cell line, NS0-derived

N-terminal Sequence Analysis Met

Predicted Molecular Mass 24.7 kDa

SPECIFICATIONS

SDS-PAGE	28-38 kDa, reducing conditions
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human EDA2R/TNFRSF27/XEDAR Fc Chimera (Catalog # 1093-XD) is coated at 0.1 µg/mL (100 µL/well), the concentration of Recombinant Human EDA-A2/Ectodysplasin A2 that produces 50% of the optimal binding response is 3-15 ng/mL.
Endotoxin Level	<1.0 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE under reducing conditions and visualized by silver stain.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 100 µg/mL in sterile PBS containing at least 0.1% human or bovine serum albumin.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

EDA-A2, a product of the EDA gene (also called Tabby), is a type II transmembrane protein that is a member of the TNF Superfamily (TNFSF). Human EDA-A2 is a 389 amino acid (aa) protein with a predicted N-terminal 39 aa cytoplasmic domain, a 22 aa transmembrane domain and a C-terminal 328 aa extracellular domain. The extracellular domains of human and mouse EDA-A2 share approximately 94% identity. Within the TNFSF, EDA-A2 shares the highest homology with EDA-A1, the other product of the EDA gene. EDA-A2 and EDA-A1 are splice variants of EDA which differ by only two amino acids. EDA-A1 contains two additional amino acids, Glu 308 and Val 309. Despite this minor difference, the EDA isoforms display strong receptor specificity. EDA-A1 only binds EDAR, a member of the TNF Receptor Superfamily (TNFRSF), whereas EDA-A2 binds to XEDAR, an X-linked TNFRSF family member with high homology to EDAR. Mutations in EDA-A1, EDA-A2, EDAR and XEDAR have been associated with hypohidrotic ectodermal dysplasia (HED). HED is characterized by abnormalities in hair, teeth and eccrine sweat gland morphogenesis. HED was initially found to associate with two gene loci, tabby and downless. Tabby was later identified as the gene for EDA and downless as the autosomal EDAR gene.

References:

1. Bayes, M. *et al.* (1998) Hum. Mol. Genet. **7**:1661.
2. Kere, J. *et al.* (1996) Nat. Genet. **13**:409.
3. Monreal, A.W. *et al.* (1998) Am. J. Hum. Genet. **63**:380.
4. Headon, D.J. and P.A. Overbeek (1999) Nat. Genet. **22**(4):370.
5. Kumar, A. *et al.* (2000) J. Biol. Chem. **276**(4):2668.
6. Monreal, A.W. *et al.* (1999) Nat. Genet. **22**(4):366.
7. Srivastava, A.K. *et al.* (1997) Proc. Natl. Acad. Sci. USA **94**(24):13069.
8. Yan, M. *et al.* (2000) Science **290**(5491):523.

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