Recombinant Human EDA2R/TNFRSF27/XEDAR His-tag

Catalog Number: 11358-XD

DESCRIPTION

Source	Chinese Hamster Ovary cell line, CHO-derived human EDA2R/TNFRSF27/XEDAR protein Met1-Glu136, with a C-terminal 6-His tag Accession # NP_001229239.1
N-terminal Sequence Analysis	Met1
Predicted Molecular Mass	16 kDa

SPECIFICATIONS

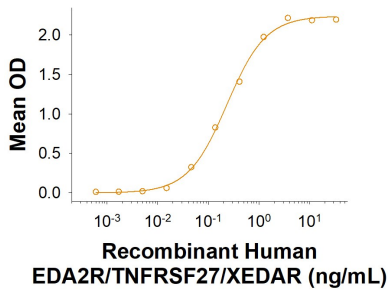
SDS-PAGE	26-30 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human EDA-A2/Ectodysplasin A2 (Catalog # 922-ED/CF) is immobilized at 1 µg/mL (100 µL/well), Recombinant Human EDA2R/TNFRSF27/XEDAR His-tag (Catalog # 11358-XD) binds with an ED_{50} of 40.0-500 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
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.

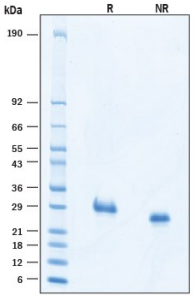
DATA

Binding Activity



Recombinant Human EDA2R/TNFRSF27/XEDAR His-tag Protein Binding Activity. When Recombinant Human EDA-A2/Ectodysplasin A2 (Catalog # 922-ED/CF) is immobilized at 1 µg/mL (100 µL/well), Recombinant Human EDA2R/TNFRSF27/XEDAR His-tag Protein (Catalog # 11358-XD) binds with an ED_{50} of 40.0-500 ng/mL.

SDS-PAGE



Recombinant Human EDA2R/TNFRSF27/XEDAR His-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Human EDA2R/TNFRSF27/XEDAR His-tag Protein (Catalog # 11358-XD) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 26-30 kDa.

bio-techne
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 Canada TEL 855 668 8722 China TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

Recombinant Human EDA2R/TNFRSF27/XEDAR His-tag

Catalog Number: 11358-XD

BACKGROUND

X-linked Ectodysplasin Receptor (XEDAR), also known as EDA-2R and TNFRSF27, is an approximately 45 kDa transmembrane protein in the TNF receptor superfamily (1). Mature human XEDAR consists of a 136 amino acid (aa) extracellular domain (ECD), a 21 aa transmembrane segment, and a 140 aa cytoplasmic domain (2). Within the ECD, human XEDAR shares 87% aa sequence identity with mouse and rat XEDAR. A 55 kDa long isoform of human XEDAR carries a 21 aa insertion in the juxtamembrane cytoplasmic domain (3). A 20 kDa fragment of the ECD can be shed by metalloprotease mediated cleavage (4). XEDAR binds selectively to the EDA-A2 variant of Ectodysplasin (EDA), while the closely related receptor EDAR binds selectively to the EDA-A1 variant (2). Other than a 2 aa deletion in its TNF-like domain, EDA-A2 is identical to EDA-A1 (2). Mutations in both EDAR and EDA are associated with hypohidrotic ectodermal dysplasia (HED), a disorder of hair, tooth, and eccrine sweat gland morphogenesis (5). XEDAR itself is strongly associated with androgenetic alopecia (male hair loss) (6). XEDAR is widely expressed, notably in embryonic basal epidermal cells and maturing hair follicles (2, 7, 8). Even though it does not contain a cytoplasmic death domain, XEDAR can associate with Fas and induce EDA-A2 dependent apoptosis (7, 9). Its transcription is directly induced by p53, and XEDAR mediated cell death is p53 dependent (7, 10). XEDAR is down-regulated in breast, colon, and lung cancers, particularly in cases with p53 mutations (7, 11). XEDAR also plays a role in EDA-A2 induced skeletal muscle degeneration and osteoblast differentiation (8, 12).

References:

1. Pfeffer, K. (2003) Cytokine Growth Factor Rev. **14**:185.
2. Yan, M. *et al.* (2000) Science **290**:523.
3. Sinha, S.K. *et al.* (2002) J. Biol. Chem. **277**:44953.
4. Tanikawa, C. *et al.* (2010) Mol. Cancer Res. **8**:855.
5. Mikkola, M.L. (2009) Am. J. Med. Genet. **149A**:2031.
6. Prodi, D.A. *et al.* (2008) J. Invest. Dermatol. **128**:2268.
7. Tanikawa, C. *et al.* (2009) Oncogene **28**:3081.
8. Newton, K. *et al.* (2004) Mol. Cell. Biol. **24**:1608.
9. Sinha, S.K. and P.M. Chaudhary (2004) J. Biol. Chem. **279**:41873.
10. Brosh, R. *et al.* (2010) FEBS Lett. **584**:2473.
11. Punj, V. *et al.* (2010) Clin. Cancer Res. **16**:1140.
12. Chang, B. *et al.* (2007) Cancer Gene Ther. **14**:927.

bio-techne®
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449