

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human EDAR in direct ELISAs and Western blots. In Western blots, less than 1% cross-reactivity with recombinant human (rh) 4-1BB, rhCD27, rhCD30, rhCD40, rhDR6, rhTAJ, rhTNF RI, rhTNF RII, rhFas, rhGITR, rhHVEM, rhLTR β, rhNGFR, rhOPG and rhRANK is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human EDAR Glu27-Ile189 Accession # Q9UNE0
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Human EDAR Fc Chimera (Catalog # 157-ER)
Blockade of Receptor-ligand Interaction	In a functional ELISA, 4-16 µg/mL of this antibody will block 50% of the binding of 10 µg/mL of Recombinant Human EDA-A1 (Catalog # 3944-ED) to immobilized Recombinant Human EDAR Fc Chimera (Catalog # 157-ER) coated at 1 µg/mL (100 µL/well). At 50 µg/mL, this antibody will block >90% of the binding.	

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month from date of receipt, 2 to 8 °C, reconstituted. ● 6 months from date of receipt, -20 to -70 °C, reconstituted.

BACKGROUND

EDAR is a type I transmembrane protein which is a member of the TNF Receptor Superfamily (TNFRSF). The extracellular domain contains 14 cysteine residues, six of which approximate the TNFRSF cysteine-rich region; the cytoplasmic domain contains a region with homology to the death domains found in other TNFRSF members. Human EDAR is a 488 amino acid (aa) protein with a predicted 26 aa signal, a 163 aa extracellular domain, a 22 aa transmembrane domain, and a 277 aa cytoplasmic domain. The human and mouse EDAR homologs share 91% identity. Within the TNFRSF, EDAR shares the highest homologies with XEDAR and TNFRSF19/TROY. EDA-A1 is the EDAR ligand. EDA and EDAR 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. EDA has two splice variants, EDA-A1 and EDA-A2, which differ by only two amino acids. Despite this minor difference, the EDA isoforms display strong receptor specificity. EDA-A1 only binds EDAR, whereas EDA-A2 binds to XEDAR, an X-linked TNFRSF member with high homology to EDAR. Mutations in EDA, EDAR and XEDAR have been associated with HED.

References:

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