

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse EDAR in ELISAs. In sandwich immunoassays, less than 10% cross-reactivity with recombinant human EDAR is observed and no cross-reactivity with recombinant mouse (rm) EDA, rmTROY, or rhXEDAR is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 132106
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse EDAR Glu27-Ile189 Accession # Q9R187
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

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.

Mouse EDAR Sandwich Immunoassay		Reagent
ELISA Capture	2-8 µg/mL	Mouse EDAR Antibody (Catalog # MAB7451)
ELISA Detection	0.5-2.0 µg/mL	Mouse EDAR Biotinylated Antibody (Catalog # BAM7452)
Standard		Recombinant Mouse EDAR Fc Chimera (Catalog # 745-ED)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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. Mouse EDAR is a 488 amino acid (aa) protein with a predicted 30 aa signal, a 159 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 to 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:

1. Headon, D.J. and Overbeek, P.A. (1999) *Nat. Genet.* **22**:370.
2. Kumar, A. *et al.* (2000) *J. Biol. Chem.* **276**:2668.
3. Monreal, A.W. *et al.* (1999) *Nat. Genet.* **22**:366.
4. Schneider, P. *et al.* (2001) *J. Biol. Chem.* **276**:18819.
5. Srivastava, A.K. *et al.* (1997) *Proc. Natl. Acad. Sci. USA* **94**:13069.
6. Yan, M. *et al.* (2000) *Science* **209**:523.