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EDA1 Antibody

Catalog # ASC11876

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	Q92838
Other Accession	NP_001390, 4503449
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	41294
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	EDA1 antibody can be used for detection of EDA1 by Western blot at 1 - 2 g/ml. Antibody can also be used for immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	1896
Other Names	Ectodysplasin-A, Ectodermal dysplasia protein, EDA protein, Ectodysplasin-A, membrane form, Ectodysplasin-A, secreted form, EDA, ED1, EDA2
Target/Specificity	EDA; EDA1 antibody is human, mouse and rat reactive. Multiple isoforms of EDA1 are known to exist.
Reconstitution & Storage	EDA1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year.
Precautions	EDA1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	EDA
Synonyms	ED1, EDA2
Function	Cytokine which is involved in epithelial-mesenchymal signaling during morphogenesis of ectodermal organs. Functions as a ligand activating the DEATH-domain containing receptors EDAR and EDA2R (PubMed:11039935, PubMed:27144394, PubMed:34582123, PubMed:8696334). May also play a role in cell adhesion (By similarity).
Cellular Location	Cell membrane {ECO:0000250|UniProtKB:O54693}; Single-pass type II membrane protein {ECO:0000250|UniProtKB:O54693}

Tissue Location	Not abundant; expressed in specific cell types of ectodermal (but not mesodermal) origin of keratinocytes, hair follicles, sweat glands. Also in adult heart, liver, muscle, pancreas, prostate, fetal liver, uterus, small intestine and umbilical cord {ECO:0000269|Ref.6}

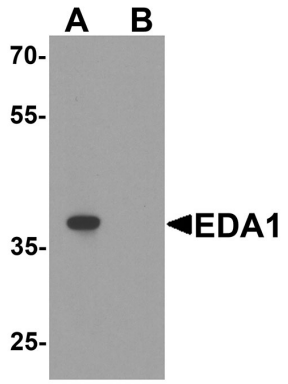
Background

Ectodysplasin A (EDA1) is a member of the TNF-related ligand family involved in the early epithelial-mesenchymal interaction that regulates ectodermal appendage formation (1). It is a trimeric type II membrane protein that co-localizes with cytoskeletal structures at the lateral and apical surfaces of cells and can be expressed as eight alternatively spliced isoforms in hair follicles and in the epidermis of adult skin (2,3). EDAs are required during development, and loss or mutation of EDA1 results in a group of developmental disorders identified as ectodermal dysplasia type 1 (4,5).

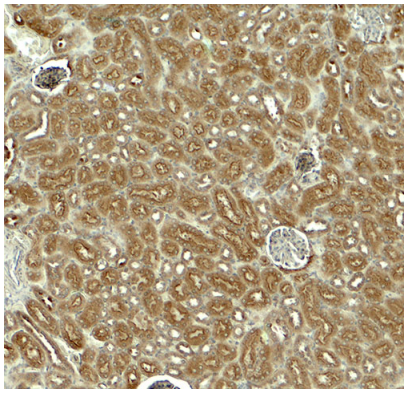
References

Kere J, Srivastava AK, Montonen O. X-linked anhidrotic (hypohidrotic) ectodermal dysplasia is caused by mutation in a novel transmembrane protein. Nat. Genet. 1996; 13:409-16.
Vincent MC, Biancalana V, Ginisty D, et al. Mutational spectrum of the ED1 gene in X-linked hypohidrotic ectodermal dysplasia. Eur. J. Hum. Genet. 2001; 9:355-63.
Ohashi M, Moriya C, Tanahashi K, et al. A new EDA gene mutation in a family of X-linked hypohidrotic ectodermal dysplasia. J. Dermatol. Sci. 2014; 74:175-7.
Bayés M, Hartung AJ, Ezer S, et al. The anhidrotic ectodermal dysplasia gene (EDA) undergoes alternative splicing and encodes ectodysplasin-A with deletion mutations in collagenous repeats. Hum. Mol. Genet. 1998; 7:1661-9.

Images

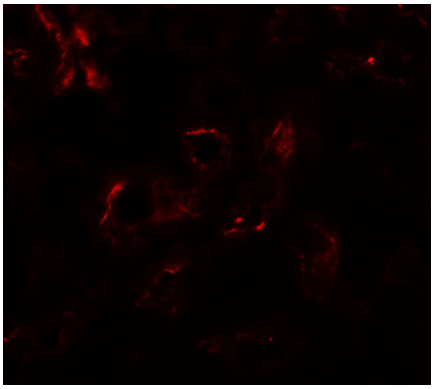


Western blot analysis of EDA1 in mouse kidney tissue lysate with EDA1 antibody at 1 µg/ml in (A) the absence and (B) the presence of blocking peptide.



Immunohistochemistry of EDA1 in mouse kidney tissue with EDA1 antibody at 5 µg/ml.

Immunofluorescence of EDA1 in mouse kidney tissue with EDA1 antibody at 20 µg/ml.



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