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ADAMTS2 Rabbit pAb

Catalog # AP99879

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	O95450
Other Accession	O95450
Predicted	Rat, Pig, Human, Mouse, Chicken, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	134755
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human ADAMTS2
Epitope Specificity	501-600/1211
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 disintegrin domain.Contains 1 peptidase M12B domain.Contains 1 PLAC domain.Contains 4 TSP type-1 domains.
SUBUNIT	May belong to a multimeric complex. Binds specifically to collagen type XIV (By similarity).
Post-translational modifications	The precursor is cleaved by a furin endopeptidase (By similarity).Glycosylated. Can be O-fucosylated by POFUT2 on a serine or a threonine residue found within the consensus sequence C1-X(2)-(S/T)-C2-G of the TSP type-1 repeat domains where C1 and C2 are the first and second cysteine residue of the repeat, respectively. Fucosylated repeats can then be further glycosylated by the addition of a beta-1,3-glucose residue by the glucosyltransferase, B3GALTL. Fucosylation mediates the efficient secretion of ADAMTS family members. Also can be C-glycosylated with one or two mannose molecules on tryptophan residues within the consensus sequence W-X-X-W of the TPRs, and N-glycosylated. These other glycosylations can also facilitate secretion (By similarity).
DISEASE	Ehlers-Danlos syndrome 7C (EDS7C) [MIM:225410]: A connective tissue disorder characterized by hyperextensible skin, atrophic cutaneous scars due to tissue fragility and joint hyperlaxity. Marked by extremely fragile tissues, hyperextensible skin and easy bruising. Facial skin contains numerous folds, as in the cutis laxa syndrome. Note=The disease is caused by mutations affecting the gene represented in this entry.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	ADAMTS2 is a member of the larger family of ADAMs (A Disintegrin And Metalloproteinase) metalloproteinases containing thrombospondin (TS) repeats. ADAMTS2 (A Disintegrin And Metalloproteinase with ThromboSpondin-2 motif), also known as Procollagen I N-Proteinase (PNP), was first described in calf skin as a proteinase that processes the amino end of Type-I collagen. PNP expression was found in skin, aorta, liver, tendon, bladder, retina, and skeletal muscle. Later, PNP was found to be a member of a larger family of ADAMs metalloproteinases containing thrombospondin (TS) repeats. Full length human ADAMTS2 contains 1211 amino acids (bovine,

1205 amino acids) and has a predicted mass of 134.7 kDa, but glycosylation and the abundance of cysteine residues gives ADAMTS2 a greater apparent molecular weight on reduced SDS-PAGE gels. Purified ADAMTS2 resolves at a lower molecular weight of 107 kDa, due to cleavage at the furin site. ADAMTS2 contains the canonical HexxHxxxxxH zinc metalloproteinase motif, and has been shown to be proteolytically active, cleaving procollagen. In addition to the metalloprotease domain, ADAMTS2 has a propeptide domain, a prohormone convertase (PC, furin) cleavage site, a cysteine-rich domain, and three thrombospondin 1 like domains, followed by a unique C-terminal domain. ADAMTS2 does not have a transmembrane domain, unlike many of the ADAMs proteases, and is a secreted protein, much of which binds to the ECM (extracellular matrix). ADAMTS2 knockout mice develop fragile skin (similar to dermatospaxis), and male infertility. Mutations of the ADAMTS2 gene are responsible for human Ehlers-Danlos syndrome type VII C and bovine dermatosparaxis. ADAMTS2 is involved in collagen biosynthesis and may also play role in development and angiogenesis.

Additional Information

Gene ID	9509
Other Names	ADAM-TS2; ADAMTS-2; ADAMTS-3; EDSDERMS; NPI; PC I-NP; PCI-NP; PCINP; PCPNI; PNPI; ADAM-TS 2; RGD1565950; ATS2_HUMAN; ADAMTS2; Procollagen I N-proteinase (PC I-NP); Procollagen I/II amino propeptide-processing enzyme; Procollagen N-endopeptidase (pNPI); 3.4.24.14; Q5NCE0_MOUSE; ATS2_MOUSE; ADAM metallopeptidase with thrombospondin type 1 motif 2; a disintegrin-like and metalloprotease (reprolysin type) with thrombospondin type 1 motif, 2; procollagen I N-proteinase; procollagen N-endopeptidase
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	ADAMTS2
Synonyms	PCINP, PCPNI
Function	Cleaves the propeptides of type I and II collagen prior to fibril assembly (By similarity). Does not act on type III collagen (By similarity). Cleaves lysyl oxidase LOX at a site downstream of its propeptide cleavage site to produce a short LOX form with reduced collagen-binding activity (PubMed:31152061).
Cellular Location	Secreted, extracellular space, extracellular matrix
Tissue Location	Expressed at high level in skin, bone, tendon and aorta and at low levels in thymus and brain

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