Human ADAM12 Biotinylated Antibody

Antigen Affinity-purified Polyclonal Sheep IgG

Catalog Number: BAF4416

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human ADAM12 in Western blots. In Western blots, approximately 10% cross-reactivity with recombinant human (rh) ADAM8 is observed and less than 1% cross-reactivity with rhADAM19 and rhADAM33 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human ADAM12 Arg29-Ser513 Accession # AAC08702
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. 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 ADAM12 (Catalog # 4416-AD)

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	**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. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

ADAM12, also known as meltrin-α, is a member of the ADAM family with metalloprotease activity (1). It consists of a propeptide, metalloproteinase, disintegrin, cysteine-rich, and EGF-like domains, a transmembrane segment, and a cytoplasmic tail with SH3 binding motifs. Human ADAM12 exists in two alternatively spliced forms: the prototype transmembrane form and a shorter secreted form lacking the transmembrane domain and the cytoplasmic tail. The secreted form has a 34 amino acid substitution in place of the transmembrane and cytoplasmic regions. In mouse, only the transmembrane form has been observed. The propeptide, which is cleaved in the Golgi by furin-like proprotein convertases, is retained in a noncovalent complex after ADAM12 secretion (2). Thus, the pro domain may function as an inhibitor of the proteolytic activity or play another unknown function. The known physiological substrates of ADAM12 are HBEGF in the heart (3) and IGFBP-3 and -5 in placental serum (4). Its proteolytic activity is inhibited by the tissue inhibitor of metalloproteinase-3 (rhTIMP-3, R&D Systems, Catalog # 973-TM) and α-2-macroglobulin. It also mediates cell-cell adhesion by interacting with integrins and syndecans as well as with additional unidentified molecules (4). ADAM12 may be a promising marker in prenatal diagnostics and breast cancer (5, 6). The recombinant ADAM12 contains the pro, metalloproteinase, and disintegrin domains. In addition to TIMP-3, the activity can also be inhibited by 5 mM 1,10-phenanthroline.

References:

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