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CD93 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1872a

Product Information

Application	WB, IHC, FC, ICC, E
Primary Accession	Q9NPY3
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1A10E10
Isotype	IgG1
Calculated MW	68560
Description	The protein encoded by this gene is a cell-surface glycoprotein and type I membrane protein that was originally identified as a myeloid cell-specific marker. The encoded protein was once thought to be a receptor for C1q, but now is thought to instead be involved in intercellular adhesion and in the clearance of apoptotic cells. The intracellular cytoplasmic tail of this protein has been found to interact with moesin, a protein known to play a role in linking transmembrane proteins to the cytoskeleton and in the remodelling of the cytoskeleton.
Immunogen	Purified recombinant fragment of human CD93 (AA: 474-535) expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	22918
Other Names	Complement component C1q receptor, C1q/MBL/SPA receptor, C1qR, C1qR(p), C1qRp, CDw93, Complement component 1 q subcomponent receptor 1, Matrix-remodeling-associated protein 4, CD93, CD93, C1QR1, MXRA4
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 FC~~1/200 - 1/400 ICC~~N/A E~~1/10000
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CD93 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	CD93
Synonyms	C1QR1, MXRA4
Function	Cell surface receptor that plays a role in various physiological processes including inflammation, phagocytosis, and cell adhesion. Plays a role in phagocytosis and enhances the uptake of apoptotic cells and immune complexes by acting as a receptor for defense collagens including surfactant protein A/SFTPA1, C1q, and mannose-binding lectin (MBL2) (PubMed:7977768). Plays a role in the regulation of endothelial cell function and adhesion by activating angiogenesis (PubMed:24809468). Mechanistically, exerts its angiogenic function by associating with beta-dystroglycan, leading to SRC- dependent phosphorylation and subsequent recruitment of CBL. In turn, CBL provides a docking site for downstream signaling components, such as CRKL to enhance cell migration (PubMed:26848865). Participates in angiogenesis also by acting as a receptor for the ECM pan-endothelial glycoprotein multimerin-2/MMRN2 and IGFBP7 ligands (PubMed:28671670, PubMed:36265539, PubMed:38218180). Both ligands play a non-redundant role in CD93-mediated endothelial cell function (PubMed:38218180). Acts as a key regulator of endothelial barrier function through modulating VEGFR2 function (By similarity).
Cellular Location	Cell membrane; Single-pass type I membrane protein
Tissue Location	Highly expressed in endothelial cells, platelets, cells of myeloid origin, such as monocytes and neutrophils. Not expressed in cells of lymphoid origin

Background

The enzyme encoded by this gene is an arylesterase that mainly hydrolyzes paroxon to produce p-nitrophenol. Paroxon is an organophosphorus anticholinesterase compound that is produced in vivo by oxidation of the insecticide parathion. Polymorphisms in this gene are a risk factor in coronary artery disease. The gene is found in a cluster of three related paraoxonase genes at 7q21.3. ; ; ;

References

1. PLoS One. 2012;7(12):e51647. 2. J Clin Immunol. 2010 Sep;30(5):723-33.

Images

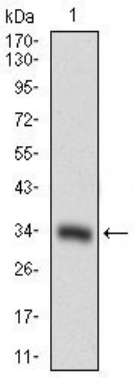
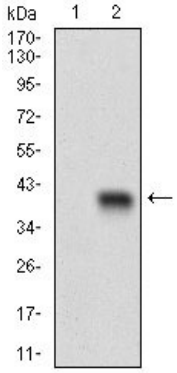


Figure 1: Western blot analysis using CD93 mAb against human CD93 recombinant protein. (Expected MW is 31.7 kDa)

Figure 2: Western blot analysis using CD93 mAb against HEK293 (1) and CD93 (AA: 474-535)-hIgGFc transfected HEK293 (2) cell lysate.



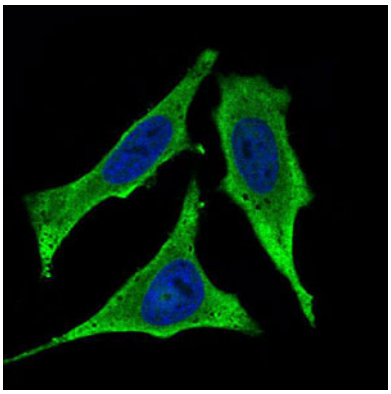


Figure 3: Immunofluorescence analysis of Hela cells using CD93 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye.

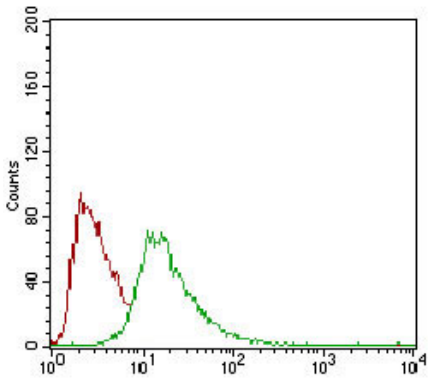


Figure 4: Flow cytometric analysis of HepG2 cells using CD93 mouse mAb (green) and negative control (red).

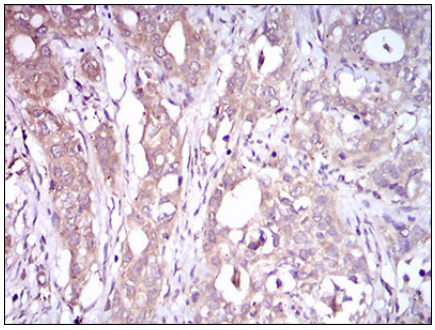


Figure 5: Immunohistochemical analysis of paraffin-embedded cervical cancer tissues using CD93 mouse mAb with DAB staining.