



CD163 Rabbit pAb

Catalog No	YP-Ab-19056
Isotype	IgG
Reactivity	Human
Applications	WB
Gene Name	CD163 M130
Protein Name	Scavenger receptor cysteine-rich type 1 protein M130 (Hemoglobin scavenger receptor) (CD antigen CD163) [Cleaved into: Soluble CD163 (sCD163)]
Immunogen	
Specificity	Endogenous
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05%BSA
Source	Polyclonal, Rabbit,IgG
Purification	The antibody was affinity-purified from rabbit ascites by affinity-chromatography using specific immunogen.
Dilution	WB 1:500-2000
Concentration	1 mg/ml
Purity	≥90%
Storage Stability	-20°C/1 year
Synonyms	
Observed Band	125kD
Calculated Molecular Weight	125kD
Cell Pathway	Membranous, Cytoplasmic
Tissue Specificity	Expressed in monocytes and mature macrophages such as Kupffer cells in the liver, red pulp macrophages in the spleen, cortical macrophages in the thymus, resident bone marrow macrophages and meningeal macrophages of the central nervous system. Expressed also in blood. Isoform 1 is the lowest abundant in the blood. Isoform 2 is the lowest abundant in the liver and the spleen. Isoform 3 is the predominant isoform detected in the blood.
Function	Caution:It is uncertain whether Met-1 or Met-6 is the initiator.,Disease:The soluble form (sCD163) in plasma is a novel parameter in diseases affecting macrophage function and monocyte/macrophage load in the body. The concentration of sCD163 is probably reflecting the number of macrophages of the 'alternative macrophage activation' phenotype with a high CD163 expression playing a major role in dampening the inflammatory response and scavenging components of damaged cells. This has initiated a number of clinical studies for evaluation of sCD163 as a disease marker in inflammatory conditions e.g. infection, autoimmune disease, transplantation, atherosclerosis and cancer.,Domain:The



SRCR domain 3 mediates calcium-sensitive interaction with hemoglobin/haptoglobin complexes. Function: Acute phase-regulated receptor involved in clearance and endocytosis of hemoglobin/haptoglobin complexes by macrophages and may thereby protect tissues from free hemoglobin-mediated oxidative damage. May play a role in the uptake and recycling of iron, via endocytosis of hemoglobin/haptoglobin and subsequent breakdown of heme. Binds hemoglobin/haptoglobin complexes in a calcium-dependent and pH-dependent manner. Exhibits a higher affinity for complexes of hemoglobin and multimeric haptoglobin of HP*1F phenotype than for complexes of hemoglobin and dimeric haptoglobin of HP*1S phenotype. Induces a cascade of intracellular signals that involves tyrosine kinase-dependent calcium mobilization, inositol triphosphate production and secretion of IL6 and CSF1. Isoform 3 exhibits the higher capacity for ligand endocytosis and the more pronounced surface expression when expressed in cells. Function: After shedding, the soluble form (sCD163) may play an anti-inflammatory role, and may be a valuable diagnostic parameter for monitoring macrophage activation in inflammatory conditions. Induction: Induced by anti-inflammatory mediators such as glucocorticoids, IL6 and IL10; suppressed by proinflammatory mediators like lipopolysaccharide (LPS), Interferon gamma/IFNG, and tumor necrosis factor alpha. Miscellaneous: Intravenous lipopolysaccharide (LPS) produces a rapid rise of sCD163 in plasma of patient as it induces metalloproteinase-mediated shedding from monocytes surface. Long-term LPS infusion finally increases expression of the membrane-bound form on circulating monocytes. PTM: A soluble form (sCD163) is produced by proteolytic shedding which can be induced by lipopolysaccharide, phorbol ester and Fc region of immunoglobulin gamma. This cleavage is dependent on protein kinase C and tyrosine kinases and can be blocked by protease inhibitors. The shedding is inhibited by the tissue inhibitor of metalloproteinase TIMP3, and thus probably induced by membrane-bound metalloproteinases ADAMs. PTM: Phosphorylated. Similarity: Contains 9 SRCR domains. Subcellular location: Isoform 1 and Isoform 2 show a lower surface expression when expressed in cells. Subunit: Interacts with CSNK2B. Tissue specificity: Expressed in monocytes and mature macrophages such as Kupffer cells in the liver, red pulp macrophages in the spleen, cortical macrophages in the thymus, resident bone marrow macrophages and meningeal macrophages of the central nervous system. Expressed also in blood. Isoform 1 is the lowest abundant in the blood. Isoform 2 is the lowest abundant in the liver and the spleen. Isoform 3 is the predominant isoform detected in the blood.

Background

The protein encoded by this gene is a member of the scavenger receptor cysteine-rich (SRCR) superfamily, and is exclusively expressed in monocytes and macrophages. It functions as an acute phase-regulated receptor involved in the clearance and endocytosis of hemoglobin/haptoglobin complexes by macrophages, and may thereby protect tissues from free hemoglobin-mediated oxidative damage. This protein may also function as an innate immune sensor for bacteria and inducer of local inflammation. Alternatively spliced transcript variants encoding different isoforms have been described for this gene. [provided by RefSeq, Aug 2011],

matters needing attention

Avoid repeated freezing and thawing!

Usage suggestions

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