10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Rabbit Anti-CD163/M130 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP52291

Product Information

Application	WB, IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q86VB7
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	125451
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human CD163
Epitope Specificity	1001-1121/1156
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Secreted and Cell membrane. Isoform 1 and isoform 2 show a lower surface expression when expressed in cells.
SIMILARITY	Contains 9 SRCR domains.
Post-translational modifications	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. Phosphorylated.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	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]

Additional Information

Gene ID	9332
Other Names	M13; MM13; Scavenger receptor cysteine-rich type 1 protein M13; Hemoglobin scavenger receptor; CD163

Target/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.
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500,Flow-Cyt=1ug/Test,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
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	CD163
Synonyms	M130
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.
Cellular Location	[Soluble CD163]: Secreted
Tissue Location	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

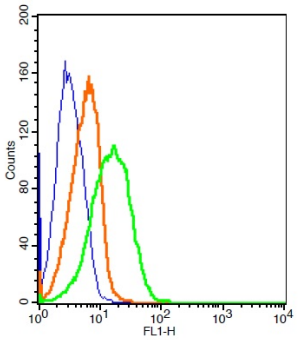
Background

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.

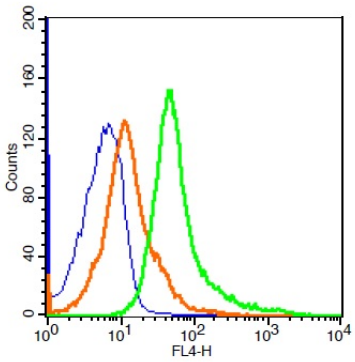
References

Law S.K.A.,et al.Eur. J. Immunol. 23:2320-2325(1993).
Ritter M.,et al.Biochem. Biophys. Res. Commun. 260:466-474(1999).
Welch S.-K.W.,et al.Submitted (MAY-2005) to the EMBL/GenBank/DDBJ databases.
Scherer S.E.,et al.Nature 440:346-351(2006).
Droste A.,et al.Biochem. Biophys. Res. Commun. 256:110-113(1999).

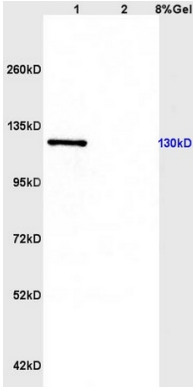
Images



Mouse splenocytes probed with Rabbit Anti-CD163/M130 Polyclonal Antibody, FITC Conjugated (AP52291) at 1:10 for 30 minutes compared to control unstained cells (blue) and isotype control (orange).

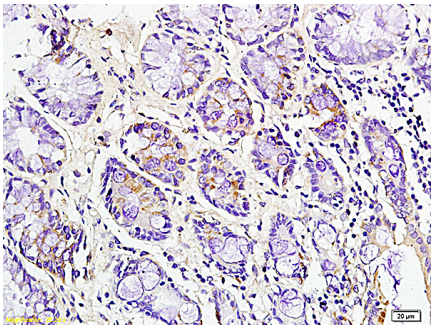


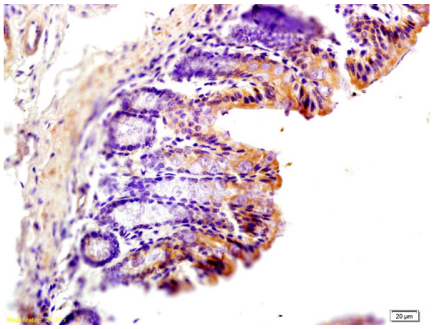
RSC96 cells probed with CD163/M130 Polyclonal Antibody, ALEXA FLUOR® 647 Conjugated (AP52291) at 1:20 for 30 minutes compared to control cells (blue)and isotype control (orange).



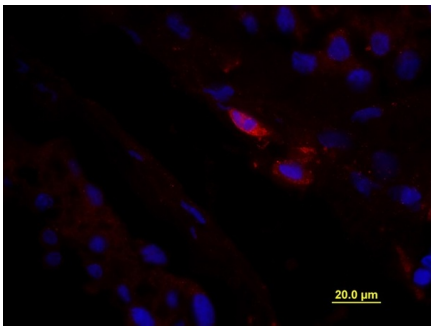
L1 rat brain, L2 mouse uterus lysates probed (AP52291) at 1:200 in 4˚C. Followed by conjugation to secondary antibody at 1:3000 90min in 37˚C. Predicted and observed band size: 130kDa.

Formalin-fixed and paraffin embedded rat colon tissue labeled with Anti-CD163/M130 Polyclonal Antibody, Unconjugated (AP52291) followed by conjugation to the secondary antibody and DAB staining





Formalin-fixed and paraffin embedded mouse intestine labeled with Rabbit Anti CD163 Polyclonal Antibody, Unconjugated AP52291 at 1:200 followed by conjugation to the secondary antibody and DAB staining



Formalin-fixed and paraffin embedded Human testis tissue labeled with unconjugated Anti-CD163/M130 Polyclonal Antibody, unconjugated AP52291 at 1:100 for 40 minutes at 37°C followed by labeling Donkey Anti-Rabbit, Cy3 conjugated 1:300, 60 minutes at 37°C. DAPI nuclear stain employed. Image shows membrane staining of testicular macrophages in the interstitial compartment of the testis, while cells in the seminiferous tubules are negative.