

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived human CD163 protein		
	Human CD163 (Gly46-Ser1050) Accession # AAH51281.1	IEGRMD	Human IgG ₁ (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Gly46		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	135 kDa		

SPECIFICATIONS

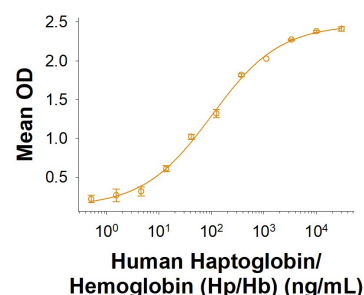
SDS-PAGE	145-160 kDa, under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. When Recombinant Human CD163 Fc Chimera is immobilized at 2.00 µg/mL (100 µL/well), the concentration of human Haptoglobin/Hemoglobin (Hp/Hb) that produces 50% binding response is 20.0-250 ng/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in 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. <ul style="list-style-type: none"> 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 3 months, -20 to -70 °C under sterile conditions after reconstitution.

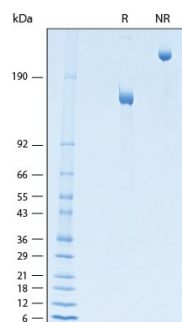
DATA

Binding Activity



Recombinant Human CD163 Fc Chimera Protein Binding Activity. Measured by its binding ability in a functional ELISA. When Recombinant Human CD163 Fc Chimera Protein (Catalog # 11228-CD) is immobilized at 2.00 µg/mL (100 µL/well), the concentration of human Haptoglobin/Hemoglobin (Hp/Hb) that produces 50% binding response is 20.0-250 ng/mL.

SDS-PAGE



Recombinant Human CD163 Fc Chimera Protein SDS-PAGE. 2 µg/lane of Recombinant Human CD163 Fc Chimera Protein (Catalog # 11228-CD) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 145-160 kDa and 290-320 kDa, respectively.

BACKGROUND

CD163, also known as M130, is a 130-160 kDa type I transmembrane glycoprotein that belongs to group B of the cysteine-rich scavenger receptor family (1-3). It is essential for clearance of hemoglobin-haptoglobin (Hb-Hp) complexes in the liver, spleen and circulation (4). The human CD163 contains a 41 amino acid (aa) signal sequence, a 1009 aa extracellular domain (ECD) with 9 scavenger receptor cysteine-rich (SRCR) domains, a 21 aa transmembrane segment, and an 85 aa cytoplasmic region. The third SRCR domain is crucial for calcium-dependent binding of hemoglobin/haptoglobin complexes (2). While all are expressed, isoform 3 is the most abundant, being generally expressed on the cell surface and most active in endocytosis (5). Expression of CD163 is constitutive, and induced by glucocorticoids, IL10, IL6 or endotoxin on circulating monocytes, tissue macrophages, and at low levels on monocytederived dendritic cells (1, 6-7). In addition to clearing HbHp complexes, CD163 is also a scavenger receptor for free Hb (if Hp is depleted) and TWEAK (TNFlike weak inducer of apoptosis) and can function as an erythroblast adhesion receptor (4, 8, 10). The macrophage scavenger receptor CD163, which is upregulated in a number of inflammatory and malignant diseases, is a promising target on macrophages in anti-inflammatory and anti-cancer therapy in avoiding off-target effects on treatment of these diseases (11).

References:

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