DESCRIPTION

Source
Mouse myeloma cell line, NS0-derived
Gly41-Ser1045, with a C-terminal 10-His tag
Accession # CAA80543

N-terminal Sequence
Analysis
Gly41

Structure / Form
Monomer

Predicted Molecular Mass
110 kDa

SPECIFICATIONS

SDS-PAGE
135-140 kDa, reducing conditions

Activity

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. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution
Reconstitute at 250 μg/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.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

CD163, previously called M130 or p155, 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 22 aa transmembrane segment, and a 39-84 aa cytoplasmic region (1). The third SRCR domain is crucial for calcium-dependent binding of hemoglobin/haptoglobin complexes (3). Three splice forms (isoforms 2, 3 and 4) vary within their intracellular regions (1, 5), while one isoform (# 4) also has a 34 aa insert between SRCR domains 5 and 6 within the ECD. While all are expressed, isoform 3 is the most abundant, being generally expressed on the cell surface and most active in endocytosis (5). An approximately 130 kDa soluble form of human CD163 (sCD163) is assumed to contain virtually all of the ECD, which shares 74%, 75%, 84%, 86%, 86% and 87% aa identity with mouse, rat, bovine, equine, porcine and canine CD163 ECD, respectively (6, 7). It is released from the cell surface by proteolysis after oxidative stress or inflammatory stimuli, including bacterial endotoxins and activation of the Toll-like receptors TLR2 or TLR5 (7-10). Expression of CD163 is constitutive, and induced by glucocorticoids, IL-10, IL-6 or endotoxin on monocytes, tissue macrophages, and at low levels on monocyte-derived dendritic cells (1, 2, 11, 12). In addition to clearing Hb-Hp complexes, CD163 is also a scavenger receptor for free Hb (if Hp is depleted) and TWEAK (TNF-like weak inducer of apoptosis), and can function as an erythroblast adhesion receptor (4, 13-15).

References:

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