

SEPSIS AND INFLAMMATION

Soluble CD163 ELISA assay for measuring Macrophage and Monocyte Activation



Macro163™

Special features

- Complete ELISA kit
- Assay around 4 hours, less than 1 hour of hands-on-time
- Only 2 µl of sample is needed
- Use of fully characterized recombinant CD163 protein as standard
- Standardized and quantitative
- Based on the two most published soluble CD163 ELISA protocols
- Pre-coated ELISA plates

Applications

- Evaluation of macrophage involvement in inflammatory, auto-immune and infectious diseases
- Detection and monitoring of macrophage activation syndromes (eg. Hemophago-cytic syndrome)⁽¹⁾
- Levels in the "high normal range" are strongly associated with increased risk of (getting) diabetes in the following years⁽²⁾

References

¹ Schaer. *Eur.J. Haematol* 74: 6-10; 2005

² Møller. *Clinical Chemistry* 57:2 291-297; 2011

Background information

CD163 is specifically expressed on peripheral blood monocytes and macrophages. A particularly high expression is seen in macrophages of the 'alternative activation' phenotype playing a major role in dampening the inflammatory response and in scavenging components of damaged cells. CD163 functions as the receptor for Haptoglobin-hemoglobin complexes, and furthermore CD163 is involved in the regulation of inflammation. Macrophages play a central role in the host response to infection and tissue damage, and are furthermore important in the pathogenesis of autoimmune diseases and cancer.

Measurement of sCD163 may be a valuable marker in diseases with macrophage and/or monocyte involvement, such as macrophage activation syndromes (e.g. hemophagocytic syndrome), infections, liver disease, auto-immune disease, atherosclerosis and cancer. Additionally, CD163 positive macrophages constitute a major cell subpopulation in human term placenta suggesting a role for the placenta functioning as an active immunosuppressive biological barrier between mother and fetus.

Principle of the Macro163™

The assay is based on the principle of the sandwich ELISA. A polyclonal antibody recognizing CD163 is immobilized on the surface of a microtiterplate. After incubation with the sample or recombinant CD163 standard a second biotinylated monoclonal antibody recognizing CD163 is added. Detection of the latter is done by adding streptavidin-HRP. Using TMB (3, 3', 5, 5'-tetramethylbenzidine) as substrate for the enzyme HRP, the amount of sCD163 protein can be quantified.

Item	Description	Package size	Product code
Macro163™ RUO	Macro163™ ELISA for measuring macrophage and monocytes activation	96 tests	IQP-383

RUO For research use only

IVD  In vitro diagnostic medical device

The products are registered as IVD in the countries belonging to the European Union.