

sTREM-1 ELISA by IQ Products

A new product for the early detection of inflammation and sepsis

Introduction

With the sTREM-1 ELISA kit (IQP-385), IQ Products offers an exciting new product in the area of inflammation and sepsis. The sTREM-1 ELISA is intended for the quantitation of soluble human TREM-1 in serum and plasma. The kit is validated for serum and plasma but can also be applied to other biological fluids like synovial fluid, ascites fluid, cerebrospinal fluid and cell- supernatants.

Background information

Soluble human Triggering Receptor Expressed on Myeloid Cells 1 (TREM-1) is a 30 kD glycoprotein expressed on granulocytes and peripheral monocytes. It has been described that the molecule can be up regulated by stimulation of the cells by bacteria and fungi and their products. Triggering of the receptor will result in the release of pro-inflammatory cytokines and chemokines as well as the up regulation of surface activation markers. In that respect it is thought to be amplifying inflammatory responses to fungal and bacterial infections and potentiating septic shock. It has been observed that the soluble form of TREM-1 is substantially different in serum of patients with sepsis. Measurement of levels of soluble TREM-1 might be valuable to determine progression of the inflammatory status of the patient.

Product comparison

In this Product Application Sheet a comparison between the **sTREM-1 ELISA** (IQ Products; product code IQP-385) and Quantikine Human TREM-1 (R&D Systems) is described. Both kits are to be used as *For Research Use Only*.

Overall it can be seen that it takes about 3,5 hours and 9 steps to obtain a result when using the sTREM-1 ELISA kit of IQ Products. In contrast, it takes 4,5 hours and 8 steps to get a result when using the kit from R&D Systems. For details see the tables 1 and 2.



Table 1: Sample analysis using the sTREM-1 ELISA kit of IQ Products

Step	Action	Time needed
1	Standard and Sample preparation	
2	Standard and sample into the wells	1 hour
3	Washing 3 times	
4	Detection antibody into the wells	1 hour
5	Washing 3 times	
6	Adding conjugate into the wells	1 hour
7	Washing 3 times	
8	Adding substrate into the wells	25 min
9	Stop	

Table 2: Sample analysis using the kit of R&D Systems

Step	Action	Time needed
1	Standard and sample preparation	
2	Adding dilution buffer into the wells	
3	Adding standard and sample into the wells	2 hour
4	Washing 4 times	
5	Adding detection and conjugation antibodies into the wells	2 hour
6	Washing 4 times	
7	Adding substrate into the wells	30 min
8	Stop	

sTREM-1 ELISA

Comparison of results

In this comparison the recombinant TREM-1 standards from both kits were evaluated using the sTREM-1 ELISA (IQ Products; IQP-385) and vice versa with the kit of R&D Systems.

Figure 1: TREM-1 Standard of both kits tested in the sTREM-1 ELISA of IQ Products

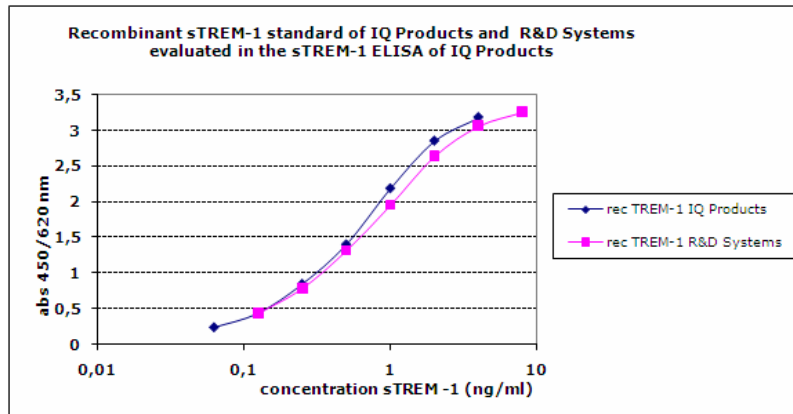
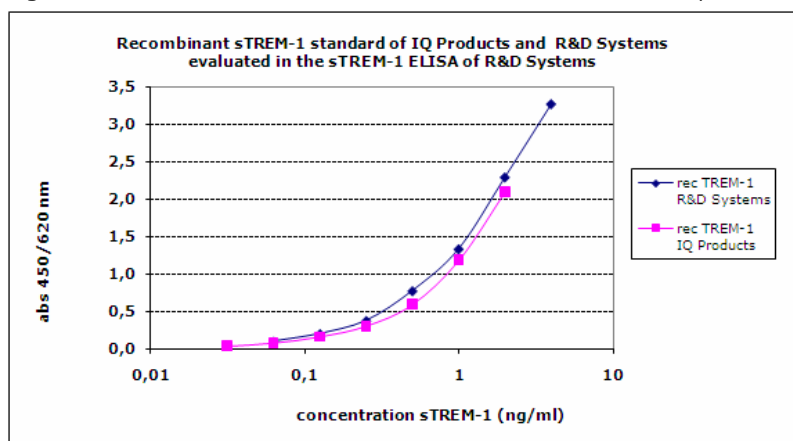


Figure 2: TREM-1 Standard of both kits tested in the ELISA from R&D Systems



Conclusion

Both recombinant TREM-1 Standards are compatible and can be exchanged on the two ELISAs. The sample analysis is finalized within 4 hours when using the IQ Products sTREM-1 ELISA (IQP-385) and in 5 hours using the kit of R&D Systems.

Other products

Product item	Kit description	Regulatory Status	Package size	Product code
Leuko64™	Flow Cytometry assay for the detection of inflammation and tissue injury by leukocyte CD64 measurement	IVD CE	70 tests 250 tests	LK-064-75 LK-064-250
Leuko64™-H	Assay for the detection of inflammation and tissue injury by leukocyte CD64 measurement especially designed for the Abbott CELL-DYN™ 4000 and CELL-DYN™ Sapphire analyzers	IVD CE	100 tests	LK-64H-100
Macro163	Standardized soluble CD163 ELISA assay for measuring macrophage and monocytes activation	RUO	96 tests	IQP-383