CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	sTREM-1, Human, clone 15G7		
Catalog number	HM2304		
Lot number	-	**Expiry date**	-
Volume	1 ml	**Amount**	100 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA+0.02%NaN3	**Concentration**	100 µg/ml
Host Species	Mouse IgG1	**Conjugate**	None
Endotoxin	N.A.	**Purification**	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #								
Yes						•		
No								
N.D.	•	•	•	•	•		•	•

N.D.= Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

General Information

Description

Monoclonal antibody 15G7 recognizes human triggering receptor expressed on myeloid cells 1 (TREM-1). TREM-1 is member of a family of cell surface receptors which function as modulators of the inflammatory response in sepsis. TREM-1 is widely expressed on cells of the myeloid lineage and acts as an inflammatory trigger and amplifier after fungal and bacterial contact. Expression is predominantly seen on neutrophils, monocytes, macrophages, microglia, osteoclasts and dendritic cells. The TREM family consist of TREM-1, TREM-2, TREM-3 (mouse) and TREM-like transcript 1&2. They are members of the transmembrane immunoglobulin superfamily. TREM-1 is a 30 kD monomeric protein synthesized as a 234 amino acid (aa) precursor with a signal peptide (16 aa), an extracellular domain (184 aa), a transmembrane domain (29 aa), and a short cytoplasmic domain (5 aa). The ligand of TREM-1is unknown. The engagement of TREMs, after association with the adapter protein DAP12 (DNA activating protein 12) which contains an immunoreceptor tyrosine-based activation motif, triggers a signalling pathway that leads to intracellular calcium mobilization, actin cytoskeleton rearrangement, and activation of several transcription factors. TREM-1 acts in synergy with Toll-like receptor signaling pathways in amplifying the inflammatory response. During infections, receptor expression is modulated and soluble TREM-1 (sTREM-1, 17 kDa) is released. TREM-1 is shed from the membrane of activated phagocytes and can be found as sTREM-1 in tissue and body fluids like plasma and bronchoalveolar lavage fluid (BAL). Some studies suggest that sTREM1 is transcribed from an alternative mRNA. sTrem-1 is unable to transmit a signal but competes for binding with endogenous ligands. Thereby dampen the amplification loop which is activated when the infection is started. sTREM1 levels are possibly a prognostic marker for sepsis. However, some other studies show also elevated levels in non-infectious causes of inflammation (e.g. Crohn disease). At least sTREM-1 in biological fluids often correlates with severity of disease.

Immunogen

sTREM1

Aliases

soluble Triggering receptor expressed on myeoloid cells 1

References

1. Haselmayer, P et al. Herpes virus entry mediator synergizes with Toll-like receptor mediated neutrophil inflammatory responses. Immunology, 2006. *119*:404
2. Haselmayer, P et al.TREM-1 ligand expression on platelets enhances neutrophil activation. Blood, 2007 *110*:1029
3. Radsak, M et al. Soluble triggering receptor expressed on myeloid cells 1 is released in patients with stable chronic obstructive pulmonary disease. Clin Dev Immunol. 2007 52040.
4. Derive, M et al. Soluble TREM-like transcript-1 regulates leukocyte activation and controls microbial sepsis. J Immunol. 2012 *188*:5585
5. Palazzo, SJ et al. Soluble Triggering Receptor Expressed on Myeloid Cells-1 (sTREM-1) as a Diagnostic Marker of Ventilator-Associated Pneumonia. Respir Care. 2012 *57*:2052

6. Saurer, L et al. Elevated levels of serum-soluble triggering receptor expressed on myeloid cells-1 in patients with IBD do not correlate with intestinal TREM-1 mRNA expression and endoscopic disease activity. Journal of Crohn's and Colitis 2012 *6*:913
7. Su, L et al. Value of soluble TREM-1, procalcitonin, and C-reactive protein serum levels as biomarkers for detecting bacteremia among sepsis patients with new fever in intensive care units: a prospective cohort study. BMC Infect Dis. 2012 *12*:157.

Storage&stability Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

Precautions For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC	Date
Robbert Zwinkels	16/03/2018

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.