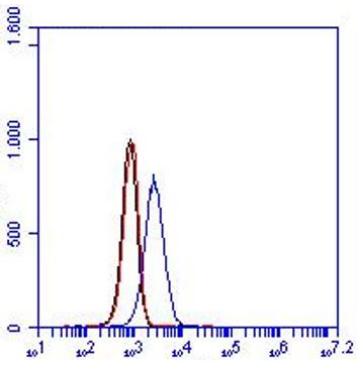
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	TNF-RII, Human, clone MR2-1, FITC conjugated		
Catalog number	HM2007F-20UG		
Lot number	-	**Expiry date**	-
Volume	200 µl	**Amount**	20 µg
Formulation	0.2 µm filtered in PBS+1%BSA+0.02%NaN3	**Concentration**	100 µg/ml
Host Species	Mouse IgG1	**Conjugate**	FITC
Endotoxin	N.A.	**Purification**	Protein G
Storage	4°C		

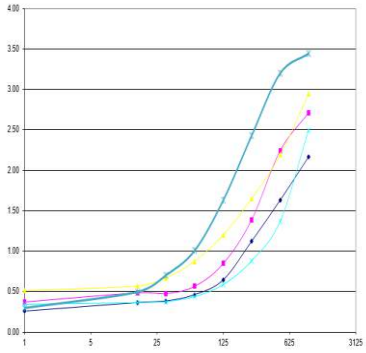
Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #			1,2	1,2,5,7	3,6-8		4	
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



FC: flow cytometry with THP-1 cells. The black line represents cells only, the red line the isotype control and the blue line HM2007 (1 µg/250000 cells).



IA: Immuno Assay experiment with HM2007 as capture antibody used in different concentrations.

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.

- IA: HM2007 can be used as a capture antibody.
- IP: The lysate was centrifuged and the supernatant was incubated with 5 mg TNFR2-specific antibody MR2-1 for 2 hours at 4°C. The immuno complexes were precipitated with protein G agarose for two hours at 4°C (Ref.4).
- W: A reduced protocol was used. The expected band size is ~65 kDa.
- FS: The monoclonal antibody MR2-1 is an agonistic antibody (after cross-linking) and receptor modulating antibody useful for cell culture experiments. The reactivity of the antibody MR2-1 with cell-bound TNF-Receptor is minimally inhibited by high concentrations of TNF-alpha.
- Positive control: human lymphnodes for frozen sections or PHA activated T cells for flow cytometry.

General Information

Description The antibody MR2-1 reacts with the extra-cellular part of the TNF-RII. It also reacts with the soluble receptor. TNF-RII is present on most cell types and is considered to play a prominent role in cell stimulation by TNF-alpha. TNF-RII molecule is shown to be responsible for stimulation of activated T-lymphocytes by TNF-alpha. The antibody cross reacts with rhesus and cynomolgus natural TNF-RII.

Immunogen sTNF-R75 purified from the culture supernatant of NSO cells (transfected with the extracellular part of TNF-R75) (Ref.1).

Aliases	Tumor necrosis factor receptor superfamily member 1B, Tumor necrosis factor receptor 2, TNF-R2, Tumor necrosis factor receptor type II, TNFR-II, p75, p80 TNF-alpha receptor, CD120b
Gene	Gene name: TNFRSF1B, TNFBR, TNFR2
Cross reactivity	Rhesus monkey: Yes; Cynomolgus monkey: Yes.

References

1. Leeuwenberg, JFM et al; Lipopolysaccharide LPS-mediated soluble TNF-Receptor release and TNF-Receptor expression by monocytes; role of CD14, LPS binding protein and bactericidal/permeability-increasing protein. J Immnol 1994, *152*: 5070
2. Leeuwenberg, JFM et al; Slow release of soluble TNF-Receptors by monocytes in vitro. J Immunol 1994, *152*: 4036
3. Marchetti, L et al; Tumor necrosis factor (TNF)-mediated neuroprotection against glutamate-induced excitotoxicity is enhanced by N-methyl-D-aspartate receptor activation. Essential role of a TNF receptor 2-mediated phosphatidylinositol 3-kinase-dependent NF-kappa B pathway. J Biol Chem 2004, *279*: 32869
4. Fisher, R et al, A TNF Receptor 2 Selective Agonist Rescues Human Neurons from Oxidative Stress-Induced Cell Death. PLoS ONE 2011, *6*: e27621
5. Richter, C et al. The Tumor Necrosis Factor Receptor Stalk Regions Define Responsiveness to Soluble versus Membrane-Bound Ligand. Molecular and Cellular Biology 2012, 32:2515
6. Okubo, Y et al. Homogeneous Expansion of Human T-Regulatory Cells Via Tumor Necrosis Factor Receptor 2. Nature SCIENTIFIC REPORTS 2013, *3* : 3153
7. He, X et al; A TNFR2-Agonist Facilitates High Purity Expansion of Human Low Purity Treg Cells. PLoSONE 2016, *11*: e0156311
8. Nguyen, D et al; Anti-TNF drives regulatory T cell expansion by paradoxically promoting membrane TNF–TNF-RII binding in rheumatoid arthritis. J. Exp. Med. 2016, *213*:1241

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.

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Approved by Manager of QC	Date
Brenda Teunissen	16/11/2020

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