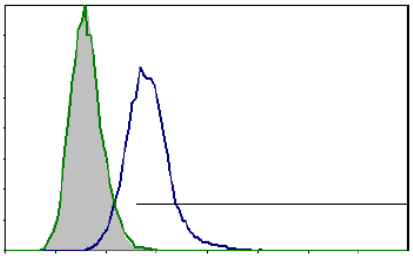
CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	TNF-RII, Mouse, clone HM102		
Catalog number	HM1011-20UG		
Lot number		**Expiry date**	
Volume	200 µl	**Amount**	20 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA	**Concentration**	100 µg/ml
Host Species	Rat IgG2a	**Conjugate**	None
Endotoxin	<24 EU/mg	**Purification**	Protein G
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #				1,5,6	2,3,5			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: detection of mouse TNF-RII (5µg/ml) on 500,000 BV2 microglial cells. Green represents an isotype-control, purple HM102.

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.

- FS: In most cases 2µg/ml acts agonistically.
- FC: 100.000 microglia cells were incubated with 10µg/ml PBS/1%serum for 30 min on ice. Positive control are RAW264.7 cells.
- W: A reduced sample treatment and SDS-Page was used. The band size is 75 kDa (Ref.4).

General Information

Description

The monoclonal antibody HM102 recognizes the extracellular part of the Tumor Necrosis Factor Receptor type I (TNF-RI) of the membrane-bound as well as the soluble receptor. TNF-RI (~55-60 kDa) is present on most cell types and is considered to play a prominent role in cell stimulation by TNF-alpha. TNF-alpha activates inflammatory responses, induces apoptosis, regulates cellular proliferation, and may even promote cancer progression. The effects of TNF-alpha are mediated by TNF-RI and TNF-RII, which have both distinct and overlapping downstream signaling cascades. Induction of cytotoxicity and other functions are mediated largely via TNF-RI. TNF-RI is equally well activated by both the 17 kDa soluble and 26 kDa membrane-bound form, whereas TNF-RII is efficiently activated only by the membrane bound form of TNF-alpha.
TNF-RI signaling is initiated when trimeric TNF-alpha binds TNF-RI receptors. Subsequent TNF-RI trimerization promotes the recruitment of a proximal signaling complex composed of TNF Receptor Associated protein with a Death Domain (TRADD), Receptor Interacting Protein (RIP), cellular Inhibitor of Apoptosis Protein 1 (cIAP1), TNF Receptor Associated Factor 2 (TRAF2), and likely TRAF5. Studies with TNF-RI-deficient mice indicate that TNF-RI mediates most of the proliferation, pro-inflammatory, and apoptosis-activating pathways.

Aliases

CD120a, Tumor necrosis factor receptor superfamily member 1A, p55/p60, TNF-RI

References

1. Tacchini-Cottier, F et al; Role of TNFR1 and TNFR2 in TNF-induced platelet consumption in mice. J Immunol 1998, *160*: 6182

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2. Brekke, O et al. Specificity of endogenous fatty acid release during tumor necrosis factor-induced apoptosis in WEHI164 fibrosarcoma cells. J of Lipid res. 1999, *40*:2223
3. Marchetti, L et al; Tumor Necrosis Factor (TNF)-mediated neuroprotection against glutamate-induced excitotoxicity is enhanced by N-methyl-D-aspartate receptor activation. J Biol Chem 2004, *279*: 32869
4. Taoufik, E et al; FLIPL protects neurons against in vivo ischemia and in vitro glucose deprivation-induced cell death. J Neurosci 2007, *27*: 6633
5. Veroni, C et al; Activation of TNF receptor 2 in microglia promotes induction of anti-inflammatory pathways. Mol Cell Neurosci 2010, *45*: 234
6. Chee, J et al. TNF receptor 1 deficiency increases regulatory T cell function in nonobese diabetic mice. J immunol 2011, *187*:1702-1712

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

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Approved by Manager of QC

Date

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