

Datasheet: MCA1560XZ

Description:	RAT ANTI HUMAN TNF ALPHA:Preservative Free
Specificity:	TNF ALPHA
Format:	Preservative Free
Product Type:	Monoclonal Antibody
Clone:	MP9-20A4
Isotype:	IgG1
Quantity:	1 mg

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry (1)	▪			
Immunohistology - Frozen	▪			
Immunohistology - Paraffin			▪	
ELISA	▪			5ug/ml - 10ug/ml
Immunoprecipitation			▪	
Western Blotting		▪		
Functional Assays	▪			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

(1)Membrane permeabilisation is required for this application. Bio-Rad recommends the use of Leucoperm™ (Product Code [BUF09](#)) for this purpose.

Target Species	Human
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	None present
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1.0 mg/ml

**External Database
Links**

UniProt:

[P01375](#) [Related reagents](#)

Entrez Gene:

[7124](#) TNF [Related reagents](#)

Synonyms

TNFA, TNFSF2

Specificity

Rat anti Human TNF alpha antibody, clone MP9-20A4 recognizes human tumor Necrosis Factor - alpha (TNF alpha), also known as TNFSF2. This ~17kDa cytokine is expressed by activated macrophages, monocytes, neutrophils, T cells and NK cells.

Rat anti Human TNF alpha antibody, clone MP9-20A4 is reported to act as a blocking antibody ([Abrams *et al.* 2001](#)).

Flow Cytometry

Use 10ul of the suggested working dilution to label 10⁶ cells in 100ul.

References

1. Butler, D.M. *et al.* (1997) DBA/1 mice expressing the human TNF-alpha transgene develop a severe, erosive arthritis: characterization of the cytokine cascade and cellular composition. [J Immunol. 159 \(6\): 2867-76.](#)
2. Vujanovic, L. *et al.* (2010) Virally infected and matured human dendritic cells activate natural killer cells via cooperative activity of plasma membrane-bound TNF and IL-15. [Blood. 116: 575-83.](#)
3. Abrams, J.S. (2001) Immunoenzymetric assay of mouse and human cytokines using NIP-labeled anti-cytokine antibodies. [Curr Protoc Immunol. Chapter 6: Unit 6.20.](#)
4. Evans HG *et al.* (2009) *In vivo* activated monocytes from the site of inflammation in humans specifically promote Th17 responses. [Proc Natl Acad Sci U S A. 106 \(15\): 6232-7.](#)
5. Kobawala TP *et al.* (2016) Significance of TNF- α and the Adhesion Molecules: L-Selectin and VCAM-1 in Papillary Thyroid Carcinoma. [J Thyroid Res. 2016: 8143695.](#)
6. Mann, E.R. *et al.* (2016) Compartment-specific immunity in the human gut: properties and functions of dendritic cells in the colon versus the ileum. [Gut. 65 \(2\): 256-70.](#)
7. Kumagai, M. *et al.* (2012) Effective transgene expression without toxicity by intraperitoneal administration of PEG-detachable polyplex micelles in mice with peritoneal dissemination. [J Control Release. 160 \(3\): 542-51.](#)
8. Poussin C *et al.* (2014) Mechanism of an indirect effect of aqueous cigarette smoke extract on the adhesion of monocytic cells to endothelial cells in an *in vitro* assay revealed by transcriptomics analysis. [Toxicol In Vitro. 28 \(5\): 896-908.](#)

Further Reading

1. Kadowaki, N. *et al.* (2000) Natural interferon alpha/beta-producing cells link innate and adaptive immunity. [J Exp Med. 192 \(2\): 219-26.](#)

Storage

Store at -20°C only.

This product should be stored undiluted.

Storage in frost-free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the protein. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life

18 months from date of despatch.

**Health And Safety
Information**

Material Safety Datasheet documentation #10162 available at:
10162: <https://www.bio-rad-antibodies.com/uploads/MSDS/10162.pdf>

Related Products

Recommended Secondary Antibodies

Rabbit Anti Rat IgG (STAR16...)	DyLight®800
Goat Anti Rat IgG (STAR73...)	RPE
Rabbit Anti Rat IgG (STAR21...)	HRP
Rabbit Anti Rat IgG (STAR17...)	FITC
Goat Anti Rat IgG (MOUSE ADSORBED) (STAR71...)	DyLight®549 , DyLight®649 , DyLight®800
Goat Anti Rat IgG (STAR131...)	Alk. Phos. , Biotin
Goat Anti Rat IgG (STAR69...)	FITC
Goat Anti Rat IgG (STAR72...)	HRP

Recommended Negative Controls

[RAT IgG1 NEGATIVE CONTROL \(MCA6004GA\)](#)

North & South America	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: antibody_sales_us@bio-rad.com	Worldwide	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: antibody_sales_uk@bio-rad.com	Europe	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody_sales_de@bio-rad.com
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