

**CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET**

<b>Product name</b>	TNF-alpha, Human, clone 5N	<b>Expiry date</b>	-
<b>Catalog number</b>	HM2218-500UG	<b>Amount</b>	500 µg
<b>Lot number</b>	-	<b>Concentration</b>	>0.5 mg/ml
<b>Volume</b>	-	<b>Conjugate</b>	None
<b>Formulation</b>	0.2 µm filtered in PBS	<b>Purification</b>	Protein G
<b>Host Species</b>	Mouse IgG2a		
<b>Endotoxin</b>	<24 EU/mg		
<b>Storage</b>	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.

- FS: antibody 5N is useful for the inhibition of biological activity of TNF-alpha. For neutralization of biological activity *in vitro* dilutions have to be made according to the amounts of TNF-alpha to be inactivated. The affinity of the monoclonal antibody 5N is  $5.7 \times 10^{-10}$ M. The homologous ELISA is useful for the detection of oligomeric human TNF-alpha. It does not recognize monomeric TNF-alpha.

**General Information**

**Description** The monoclonal antibody 5N reacts with Tumor Necrosis Factor alpha (TNF-alpha). Tumor necrosis factor-alpha (TNF-alpha), a homotrimeric 17 KD protein, is a potent mediator of inflammatory and metabolic functions. TNF-alpha was originally detected as a highly cytotoxic cytokine for tumor cells, it causes tumor necrosis *in vivo* and shows cytolytic activity against tumor cells *in vitro*. Further TNF-alpha has been implied as central mediator in shock induced by gram negative micro-organisms. The cytokine TNF-alpha is found to be a central mediator in many inflammatory and immunological processes: it can be induced by various products of micro-organisms and by various cytokines but it also induces on its turn the production of many cytokines. Signal transduction occurs via two types of TNF-receptors, the TNF-receptors I and II. The receptors differ strongly in their intra-cellular signaling pathways. The TNF-alpha trimer interacts with either of the two types of TNF-R leading to receptor cross-linking. The monoclonal antibody 5N cross-reacts and cross-neutralizes all monkey species TNF-alpha, except pig-tail macaque. With affinity about two orders lower it recognizes bovine and canine TNF-alpha.

**Aliases** Tumor Necrosis Factor Alpha, TNF, TNF-SF2, DIF, Cachectin.

- References**
- Petyovka, N et al; Homologous ELISA for detection of oligomeric human TNF: properties of the assay. J Immunol Methods 1995, 186: 161
  - Song, X et al; Effects of 2 different anti-tumor necrosis factor-alpha agents in a primate model of subcutaneous formation. J Infect Dis 2002, 185: 204

**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  
Brenda Teunissen

Date  
05/11/2019

Do you have any questions or comments regarding this product? Please contact us via [support@hycultbiotech.com](mailto:support@hycultbiotech.com).