

## Datasheet: AAR33

**BATCH NUMBER 155166**

<b>Description:</b>	RABBIT ANTI RAT TNF ALPHA
<b>Specificity:</b>	TNF ALPHA
<b>Format:</b>	Purified
<b>Product Type:</b>	Polyclonal Antibody
<b>Isotype:</b>	Polyclonal IgG
<b>Quantity:</b>	0.1 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](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen			▪	
Immunohistology - Paraffin	▪			
ELISA	▪			0.5 - 2.0 ug/ml
Immunoprecipitation			▪	
Western Blotting	▪			0.1 - 0.2 ug/ml
Functional Assays	▪			0.07 - 0.1 ug/ml

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 systems with the appropriate negative/positive controls.

### Target Species

Rat

### Product Form

Purified IgG - lyophilised

### Reconstitution

Reconstitute with 0.1ml distilled water

Care should be taken during reconstitution as the protein may appear as a film at the bottom of the vial. Bio-Rad recommend that the vial is gently mixed after reconstitution. For long term storage the addition of 0.09% sodium azide is recommended.

N.B. For functional studies do not add sodium azide

### Antiserum Preparation

Antisera to rat TNF alpha were raised by repeated immunisations of rabbits with highly purified antigen. Purified IgG was prepared from whole serum by affinity chromatography.

<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	None present
<b>Carrier Free</b>	Yes
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml after reconstitution.
<b>Immunogen</b>	Recombinant rat TNF alpha ( <a href="#">PRP16</a> ).
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P16599</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">24835</a>    Tnf    <a href="#">Related reagents</a></p>
<b>Synonyms</b>	Tnfa, Tnfsf2
<b>RRID</b>	AB_2204372
<b>Specificity</b>	<b>Rabbit anti Rat TNF alpha antibody</b> recognizes rat tumor necrosis factor alpha (TNF $\alpha$ ), also known as Cachectin or Tumor necrosis factor ligand superfamily member 2. Rat TNF $\alpha$ is a 235 amino acid ~17 kDa single pass type II O-linked transmembrane glycoprotein, it also exists as a secreted cytokine through cleavage between residues 79 and 80. TNF $\alpha$ is produced by many cell types including macrophages, monocytes, neutrophils and a population of activated NK cells.
<b>ELISA</b>	This product may be used in an indirect ELISA or as a capture antibody in a sandwich ELISA together with <a href="#">AAR33B</a> as the detection reagent and <a href="#">PRP16</a> as the standard.
<b>References</b>	<ol style="list-style-type: none"> <li>Halin, S. <i>et al.</i> (2010) Pigment epithelium-derived factor stimulates tumor macrophage recruitment and is downregulated by the prostate tumor microenvironment. <a href="#">Neoplasia. 12: 336-45.</a></li> <li>Khandelwal, P.J. <i>et al.</i> (2010) Parkinson-related parkin reduces <math>\alpha</math>-Synuclein phosphorylation in a gene transfer model. <a href="#">Mol Neurodegener. 5: 47.</a></li> <li>Sandoval, J. <i>et al.</i> (2010) Ordered transcriptional factor recruitment and epigenetic regulation of tnf-alpha in necrotizing acute pancreatitis. <a href="#">Cell Mol Life Sci. 67: 1687-97.</a></li> <li>Irwin, M.W. <i>et al.</i> (1999) Tissue expression and immunolocalization of tumor necrosis factor-alpha in postinfarction dysfunctional myocardium. <a href="#">Circulation. 99: 1492-8.</a></li> <li>El-Kharashi, O.A. <i>et al.</i> (2011) The Potential Pharmacological and Histological Benefits of Carvedilol on the Hippocampal Post- Stroke Seizures in Rats <a href="#">Life Science Journal, 8: 951-60</a></li> <li>Elgarf, A.S. <i>et al.</i> (2014) Lipopolysaccharide repeated challenge followed by chronic mild stress protocol introduces a combined model of depression in rats: reversibility by imipramine and pentoxifylline. <a href="#">Pharmacol Biochem Behav. 126: 152-62.</a></li> <li>Aharon-Hananel G <i>et al.</i> (2015) Antidiabetic Effect of Interleukin-1<math>\beta</math> Antibody Therapy</li> </ol>

- Through  $\beta$ -Cell Protection in the Cohen Diabetes-Sensitive Rat. [Diabetes. 64 \(5\): 1780-5.](#)
8. Savard, A. *et al.* (2013) Involvement of neuronal IL-1 $\beta$  in acquired brain lesions in a rat model of neonatal encephalopathy. [J Neuroinflammation. 10: 110.](#)
9. Alizadeh, A. *et al.* (2017) Neuregulin-1 positively modulates glial response and improves neurological recovery following traumatic spinal cord injury. [Glia.Apr 29. \[Epub ahead of print\]](#)
10. Zhang, Y. *et al.* (2015) Simvastatin inhibits ischemia/reperfusion injury-induced apoptosis of retinal cells via downregulation of the tumor necrosis factor- $\alpha$ /nuclear factor- $\kappa$ B pathway. [Int J Mol Med. 36 \(2\): 399-405.](#)
11. Kartha, S. *et al.* (2016) Development of a Rat Model of Mechanically Induced Tunable Pain and Associated Temporomandibular Joint Responses. [J Oral Maxillofac Surg. 74 \(1\): 54.e1-10.](#)
12. Li, J. *et al.* (2016) Propofol reduces liver dysfunction caused by tumor necrosis factor- $\alpha$  production in Kupffer cells. [J Anesth. 30 \(3\): 420-6.](#)
13. Dyck, S. *et al.* (2018) Perturbing chondroitin sulfate proteoglycan signaling through LAR and PTP $\sigma$  receptors promotes a beneficial inflammatory response following spinal cord injury. [J Neuroinflammation. 15 \(1\): 90.](#)

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**Storage** Prior to reconstitution store at -20°C.  
After reconstitution store at -20°C.

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

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**Guarantee** 12 months from date of despatch

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**Health And Safety Information** Material Safety Datasheet documentation #10162 available at: <https://www.bio-rad-antibodies.com/SDS/AAR33>  
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**Regulatory** For research purposes only

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## Related Products

### Recommended Secondary Antibodies

Goat Anti Rabbit IgG (Fc) (STAR121...) [Biotin](#), [FITC](#), [HRP](#)

Goat Anti Rabbit IgG (H/L) (STAR124...) [HRP](#)

Sheep Anti Rabbit IgG (STAR35...) [RPE](#)

### Recommended Useful Reagents

[ANTIGEN RETRIEVAL BUFFER, pH8.0 \(BUF025A\)](#)

[TidyBlot WESTERN BLOT DETECTION REAGENT:HRP \(STAR209P\)](#)

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