

## Datasheet: PHP051A

**BATCH NUMBER 155576**

|                      |                             |
|----------------------|-----------------------------|
| <b>Description:</b>  | RECOMBINANT HUMAN TNF ALPHA |
| <b>Name:</b>         | TNF ALPHA                   |
| <b>Format:</b>       | Rec. Protein                |
| <b>Product Type:</b> | Recombinant Protein         |
| <b>Quantity:</b>     | 10 µg                       |

## 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).

|                   | <b>Yes</b> | <b>No</b> | <b>Not Determined</b> | <b>Suggested Dilution</b> |
|-------------------|------------|-----------|-----------------------|---------------------------|
| ELISA             | ▪          |           |                       | 0.2 - 0.4ng/well          |
| Western Blotting  | ▪          |           |                       | 1.5 - 3.0ng/lane          |
| Functional Assays | ▪          |           |                       | 0.05ng/ml - 20ng/ml       |

Where this protein 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 protein for use in their own system using appropriate positive/negative controls.

|                                 |   |
|---------------------------------|---|
| <b>Target Species</b>           | Human   |
| <b>Product Form</b>             | Purified recombinant cytokine - lyophilized   |
| <b>Reconstitution</b>           | Reconstitute with 0.1 ml distilled water<br>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.<br>N.B. For functional studies do not add sodium azide |
| <b>Buffer Solution</b>          | Phosphate buffered saline   |
| <b>Preservative Stabilisers</b> | None present  |
| <b>Carrier Free</b>             | Yes   |
| <b>Endotoxin Level</b>          | < 0.1 ng/ug   |

|                                       |  |
|---------------------------------------|--|
| <b>Approx. Protein Concentrations</b> | Total protein concentration 0.1 mg/ml after reconstitution   |
| <b>External Database Links</b>        | <p><b>UniProt:</b><br/> <a href="#">P01375</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b><br/> <a href="#">7124</a>    TNF    <a href="#">Related reagents</a></p>   |
| <b>Synonyms</b>                       | TNFA, TNFSF2   |
| <b>Product Information</b>            | <b>Recombinant Human tumor necrosis factor alpha</b> is an <i>E. coli</i> -derived recombinant protein corresponding to the C-terminal domain of human tumour necrosis factor alpha (TNFa), a pro-inflammatory cytokine with cytotoxic effects on various tumour cells.  |
| <b>Protein Molecular Weight</b>       | 17.4 kDa based on 157 amino acid sequence  |
| <b>Activity</b>                       | PHP051A has a specific activity of $>2 \times 10^7$ units/mg as determined by cytolysis of L929 cells in the presence of Actinomycin D.  |
| <b>Purity</b>                         | >98% by SDS PAGE and HPLC analysis   |
| <b>ELISA</b>                          | This product may be used as a standard in ELISA with either <a href="#">AHP1212</a> or <a href="#">AHP1212B</a> .  |
| <b>Western Blotting</b>               | This product may be used as the positive control in Western Blotting applications with either <a href="#">AHP1212</a> or <a href="#">AHP1212B</a> .  |
| <b>References</b>                     | <ol style="list-style-type: none"> <li>1. Cernuda-morollón, E. <i>et al.</i> (2001) 15-Deoxy-Delta 12,14-prostaglandin J2 inhibition of NF-kappaB-DNA binding through covalent modification of the p50 subunit. <a href="#">J Biol Chem. 276 (38): 35530-6.</a></li> <li>2. Taubert, A. &amp; Hermosilla, C. (2008) Bovine recombinant IFNgamma induces endothelial cell gene transcription of immunoregulatory molecules and upregulates PMN and PBMC adhesion on bovine endothelial cells. <a href="#">Vet Res Commun. 32: 35-47.</a></li> <li>3. Dernfalk, J. <i>et al.</i> (2004) Commercially available antibodies to human tumour necrosis factor-alpha tested for cross-reactivity with ovine and bovine tumour necrosis factor-alpha using flow cytometric assays. <a href="#">Acta Vet Scand. 45: 99-107.</a></li> <li>4. Taubert, A. <i>et al.</i> (2007) Eimeria bovis infection enhances adhesion of peripheral blood mononuclear cells to and their transmigration through an infected bovine endothelial cell monolayer in vitro. <a href="#">Parasitol Res. 101: 591-8.</a></li> <li>5. Gerber, P.A. <i>et al.</i> (2016) Mechanisms of skin aging induced by EGFR inhibitors. <a href="#">Support Care Cancer. 24 (10): 4241-8.</a></li> <li>6. Hara, H. <i>et al.</i> (2021) Stable expression of the human thrombomodulin transgene in pig endothelial cells is associated with a reduction in the inflammatory response. <a href="#">Cytokine. 148: 155580.</a></li> <li>7. Yamazaki, N. <i>et al.</i> (2022) VE-cadherin-dependent vasculogenic mimicry-like tube formation in rheumatoid arthritic synovium, <a href="#">Res Sq. 10 Oct [Epub ahead of print].</a></li> </ol> |

**Storage** Prior to reconstitution store at -20°C. Following 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 protein. Should this product contain a precipitate we recommend microcentrifugation before use.

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**Guarantee** Guaranteed for 3 months from the date of reconstitution or until the date of expiry, whichever comes first. Please see label for expiry date.

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**Health And Safety Information** Material Safety Datasheet documentation #10527 available at: <https://www.bio-rad-antibodies.com/SDS/PHP051A>  
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**Regulatory** For research purposes only

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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)  
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