

**MONOCLONAL ANTIBODY TO
HUMAN TUMOR NECROSIS FACTOR-ALPHA (TNF-alpha)
Clone 4H31**



Catalog nr	HM2009 (lot number and expiry date are indicated on the label)
Description	The antibody reacts with human native and recombinant TNF-alpha as assessed by ELISA. The antibody inhibits the biological activity of human native and recombinant TNF-alpha as determined with L929 cells in a cytotoxicity assay. The antibody cross reacts with rhesus and cynomolgus natural TNF-alpha and lacks crossreactivity with human lymphotoxin.
Species	Mouse IgG ₁
Formulation	1 ml (100 µg/ml) 0.2 µm filtered antibody solution in PBS, containing 0.02% sodium azide and 0.1% bovine serum albumin.
Application	The antibody is useful for inhibition of the biological activity of TNF-alpha. It has been tested in cytotoxicity assays as well as in assays with activation of endothelial cells and found to be a powerful antibody. It can be used to discriminate between TNF-alpha and TNF-beta or lymphotoxin. Furthermore the antibody is useful for immuno assays, immuno precipitation, flow cytometry and Western blotting, although anti-TNF-alpha antibody HM2010 is more useful for this purpose (depending on the sensitivity demanded). The antibody stains TNF-alpha in frozen sections of inflamed tissues.
Use	For immunohistology, flow cytometry and Western blotting 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 1:10. For neutralization of biological activity in vitro dilutions have to be made according to the amount of TNF-alpha to be inactivated. Before use in biological assays, the product must be filter sterilized and depending on the concentration to be used dialyzed against culture medium to remove the sodium azide added. Please inquire for availability of azide free solutions.
Storage and stability	Product should be stored at 4°C. Under recommended storage conditions, product is stable for 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. Hbt is not responsible for any patent infringements that might result with the use of or derivation of this product.
References	<ol style="list-style-type: none">1. Gerspach, J et al; Detection of membrane-bound Tumor Necrosis Factor (TNF): an analysis of TNF-specific reagents. <i>Microsc Res Tech</i> 2000, <i>50</i>: 2432. Limb, GA et al; Distribution of TNF-alpha and its reactive vascular adhesion molecules in fibrovascular membranes of proliferative diabetic retinopathy. <i>Br J Ophthalmol</i> 1996, <i>80</i>: 1683. Laan van der, N et al; Tumor necrosis factor alpha (TNFalpha) in human skin: a comparison of different antibodies for immunohistochemistry. <i>Arch Dermatol Res</i> 2001, <i>293</i>: 226
Also available	HC2040 Recombinant Human TNF-alpha (E.coli-derived); 5 x 10 ⁴ units HM2010 Monoclonal antibody against Human TNF-alpha, clone 52B83; membrane TNF HM2024 Monoclonal antibody against Human TNF-alpha, clone T1; membrane TNF HM2026 Monoclonal antibody against Human TNF-alpha, clone T3; membrane TNF and receptor bound TNF HP9001 Polyclonal antibody against Human TNF-alpha, membrane TNF and receptor bound TNF