



## Peninsula Laboratories, LLC

A Member of the Bachem Group

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### Biotinylated Monoclonal Antibody To Human CD120b TNF Receptor p75

Monoclonal antibody utr 1 is useful for studying biological effects of TNF-receptor p75 *in vitro* where it inhibits the binding of radio labelled TNF to human cells expressing the p75 TNF receptor. In order to completely block TNF binding to the cell surface, 10µg/ml of utr 1 are required. utr 1 itself may have an agonistic effect in assays measuring cytotoxicity, fibroblast growth or IL-6 secretion.

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<b>Product Number:</b>	T-1413
<b>Clone:</b>	utr 1
<b>Host species, isotype:</b>	Mouse IgG1
<b>Quantity:</b>	200µg
<b>Format:</b>	Affinity purified, biotinylated, lyophilized.  Reconstitute by adding 0.5ml distilled water. This stock solution contains 0.4mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), 10mg/ml bovine serum albumin (BSA) as a stabilizer and 0.01% thimerosal as a preservative.
<b>Stability:</b>	Original vial: 1 year at 4° - 8°C  Stock solution or aliquots thereof: 1 year at -20°C. Avoid repeated thawing and freezing
<b>Applications:</b>	Tested for immunohistochemistry (IHC); has been described to work in FACS, Western Blots, immunoprecipitation.  <b>Approximate working dilution for IHC:</b> Frozen sections: 1µg/ml (1:400) Paraffin sections: 10µg/ml (1:40); pretreatment not necessary.  Optimal dilutions should be determined by the end user.  Suggested positive control: Human tonsil.
<b>Immunogen:</b>	Partially purified TNF binding proteins.



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### **Antigen distribution:**

**Isolated cells:** Isolated cells and cell lines: U937, HL-60. Lymphocytes from peripheral blood show a faint staining. Mitogen stimulation of lymphocytes increases the intensity. Bone marrow cells are not stained with utr 1.

**Tissue sections:** Immunohistochemical staining in normal not diseased tissue is confined to the lymphohistiocytic tissue, which includes the thymus and lymphoid organs such as spleen, tonsils, lymph nodes, mucosa, and associated lymphoid tissue (see ref 7). Expression of p55 and p75 receptors can be detected in different areas where an overlapping is found between TNFR p75 and IL-2 receptor expression. The p75 expression can be detected mainly in the T-cell area whereas the p55 expression is restricted to dendritic reticulum cells in the germinal centres.

In non lymphoid organs (kidney, liver, heart, brain, adrenals, uterus, ovary, testes, prostate, stomach, intestines) utr 1 recognizes only in kidney some interstitial reticulum cells. Cells which are known to respond to TNF namely endothelial cells, smooth muscle cells and fibroblasts did not show expression of p55 and or p75 TNF receptor (see ref 7). Investigations on pathological tissues show a TNFR p75 expression on epitheloid cell granulomas and giant cells in sarcoidosis.

### **Specificity:**

**Human:** CD120b.

**Other species:** not tested.

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### **Selected references**

Brockhaus, M., et al.: Identification of two types of necrosis factor receptors on human cell lines by monoclonal antibodies. *Proc. Natl. Acad Sci USA* (1990) **87**: 3127-3131

Espevik, T., et al.: Characterization of binding and biological effects of monoclonal antibodies against a human tumor necrosis factor receptor. *J Exp Med* (1990) **171**:415-426

Hohmann, H., et al.: Expression of the type A and B Tumor Necrosis Factor (TNF) receptors is independently regulated and both receptors mediate activation of the transcription factor NF- $\kappa$ B. *J Biol Chem* (1990) **265**: 22409-22417

Shalaby, M.R., et al.: Binding and regulation of cellular functions by monoclonal antibodies against human tumor necrosis factor receptors. *J Exp Med* (1990) **172**: 1517-1520

Gehr, G., et al.: Both tumor necrosis factor receptor types mediate proliferative signals in human mononuclear cell activation. *J Immunol* (1992) **149**: 911-917

Vandenabeele, P., et al.: Functional characterization of the human tumor necrosis factor receptor p75 in a transfected rat/mouse T cell hybridoma. *J Exp Med* (1992) **176**: 1015-1024

Ryffel B., et al.: TNF receptors in lymphoid tissues and lymphomas: Source and side of action of tumor necrosis factor alpha. *Am J Pathol* (1991) **139**: 7-15.

For in vitro research only. Caution: this product contains thimerosal, a poisonous and hazardous substance.