



Product Information Sheet

Polyclonal Anti-Tumor Necrosis Factor Receptor 1, **TNFR1** (Magnetic Bead Conjugate)

Catalogue No. PA1210-M

Immunogen

Lot No. 01210121110121

Purification

Immunogen affinity purified

Ig type: rabbit IgG1

Contents

Size: 100µg/Vial

Each vial contains 1mg/ml Magnetic Bead in PBS, pH 7.2, 0.05mg NaN₃.

Specificity

Human.

No cross reactivity with other proteins.

Storage

Store at 4°C for frequent use.

Description:

This Antagene antibody is immobilized by the covalent reaction of hydrazinonicotinamide-modified antibody with formylbenzamide-modified magnetic beads. It is useful for immunoprecipitation

Recommended application

Immunoprecipitation(IP)

BACKGROUND

Tumor necrosis factor receptor 1(TNFR1), a potent cytokine, elicits a broad spectrum of biologic responses which are mediated by binding to a cell surface receptor. Its gene is located on 12p13.2. The coding region and the 3-prime untranslated region of TNFR1 are distributed over 10 exons.¹ There are 2 different proteins that serve as major receptors for TNF-alpha, one associated with myeloid cells and one associated with epithelial cells.² Additionally, TNFR1 associates with the MADD protein through a death domain-death domain interaction. MADD provides a physical link between TNFR1 and the induction of mitogen-activated protein (MAP) kinase (e.g., ERK2) activation and arachidonic acid release.³ TNFR1-induced apoptosis involves 2 sequential signaling complexes. Complex I, the initial plasma membrane-bound complex, consists of TNFR1, the adaptor TRADD, the kinase RIP1, and TRAF2 and rapidly signals activation of NF-kappa-B. In a second step, TRADD and RIP1 associate with FADD and caspase-8, forming a cytoplasmic complex, complex II.⁴

REFERENCE

- 1.Fuchs, P.; Strehl, S.; Dworzak, M.; Himmler, A.; Ambros, P. F. : Structure of the human TNF receptor 1 (p60) gene (TNFR1) and localization to chromosome 12p13. *Genomics* 13: 219-224, 1992.
- 2.Hohmann, H.-P.; Remy, R.; Brockhaus, M.; van Loon, A. P. G. M. : Two different cell types have different major receptors for human tumor necrosis factor (TNF-alpha). *J. Biol. Chem.* 264: 14927-14934, 1989.
- 3.Schievella, A. R.; Chen, J. H.; Graham, J. R.; Lin, L.-L. : MADD, a novel death domain protein that interacts with the type 1 tumor necrosis factor receptor and activates mitogen-activated protein kinase. *J. Biol. Chem.* 272: 12069-12075, 1997.
- 4.Micheau, O.; Tschopp, J. : Induction of TNF receptor I-mediated apoptosis via two sequential signaling complexes. *Cell* 114: 181-190, 2003.

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