

TNFR1 / CD120a / TNFRSF1A Neutralizing

Antibody

Catalog Number: 10872-R111

Sino Biological
Biological Solution Specialist

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| General Information | |
|----------------------|--|
| Immunogen: | Recombinant Human TNFR1 / CD120a / TNFRSF1A Protein (Catalog#10872-H08H) |
| Clone ID: | R111 |
| Ig Type: | Rabbit IgG |
| Applications: | Neutralization |
| Specificity: | Human TNFR1 / CD120a / TNFRSF1A |
| Formulation: | 0.2 µm filtered solution in Histidine and Arginine buffer containing 120mM NaCl, 0.02% Tween 80, pH6.0 |
| Storage: | < -20°C |

Preparation

This antibody was obtained from a rabbit immunized with purified, recombinant Human TNFR1 / CD120a / TNFRSF1A (rh TNFR1 / CD120a / TNFRSF1A; Catalog#10872-H08H; NP_001056.1; Met1-Thr211) and was produced using recombinant antibody technology.

Specificity

Human TNFR1 / CD120a / TNFRSF1A

No cross-reactivity with Mouse TNFR1 (Catalog#150496-M08H) in ELISA assay**Storage**

This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20°C to -80°C. **Preservative-Free**.

Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. **Avoid repeated freeze-thaw cycles**.

Background

The cluster of differentiation (CD) system is commonly used as cell markers in immunophenotyping. Different kinds of cells in the immune system can be identified through the surface CD molecules which associating with the immune function of the cell. There are more than 320 CD unique clusters and subclusters have been identified. Some of the CD molecules serve as receptors or ligands important to the cell through initiating a signal cascade which then alter the behavior of the cell. Some CD proteins do not take part in cell signal process but have other functions such as cell adhesion. CD120a (cluster of differentiation 120a), also known as TNFR1 / TNFRSF1A, is a member of CD family, tumor necrosis factor receptor superfamily. CD120a is one of the most primary receptors for the tumor necrosis factor-alpha. It has been shown to be localized to both plasma membrane lipid rafts and the trans golgi complex with the help of the death domain (DD). CD120a can activate the transcription factor NF-κB, mediate apoptosis, and regulate inflammation processes.

Reference

- Zola H, *et al.* (2007) CD molecules 2006-human cell differentiation molecules. *J Immunol Methods.* 318 (1-2): 1-5.
- Ho IC, *et al.* (2009) GATA3 and the T-cell lineage: essential functions before and after T-helper-2-cell differentiation. *Nat Rev Immunol.* 9 (2): 125-35.
- Matesanz-Isabel J, *et al.* (2011) New B-cell CD molecules. *Immunology Letters.* 134 (2): 104-12.
- Cottin V, *et al.* (2002) Restricted localization of the TNF receptor CD120a to lipid rafts: a novel role for the death domain. *The journal of immunology.* 168: 4095-102.

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Applications

Block – In a functional ELISA which immobilized recombinant Human TNFR1 (Catalog# 10872-H08H) at 0.2 μ g/mL (100 μ L/well) in the plate, the Rabbit anti-Human Monoclonal Antibody (Catalog# 10872-R111) can block the binding of 0.5 μ g/mL of biotinylated Human TNF α (Catalog# 10602-HNAE-B) to human TNFR1, the EC50 is 4.66 μ g/mL.

Neutralization – Recombinant Human TNFR1/TNFRSF1A (Catalog # 10872-H08H) inhibits Recombinant Human TNF α (Catalog # 10602-HNAE) induced cytotoxicity in the L-929 mouse fibroblast cell line. Inhibition of Recombinant Human TNF α (0.2 ng/mL) activity elicited by Recombinant Human TNFR1/TNFRSF1A (0.3 μ g/mL) is neutralized by increasing concentrations of Human TNFR1/TNFRSF1A Monoclonal Antibody (Catalog #10872-R111). The IC50 is typically 0.2-1 μ g/mL in the presence of the metabolic inhibitor actinomycin D (1 μ g/mL).

