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Monoclonal Antibody to CD120a / TNFR1 - PE

Alternate names: TNF-R1, TNF-RI, TNFR-I, Tnfrsf1a, Tumor necrosis factor receptor 1, Tumor necrosis factor receptor superfamily member 1A, Tumor necrosis factor receptor type I, p55, p60

Catalog No.: SM1185R

Quantity: 100 Tests

Background: Tumor Necrosis Factor (TNF) is a cytokine whose function is mediated through two distinct cell surface receptors (TNF Receptor I and TNF Receptor II) that are included in the TNF Receptor superfamily along with FAS antigen and CD40. TNF Receptors I and II are 55 and 75 kDa members, respectively, of a family of cell surface molecules including nerve growth factor receptor, Fas/Apo1, CD30, OX40, and 41BB, which are characterized by cysteine rich motifs in the extracellular domain. While TNF Receptor I and TNF Receptor II share 28% sequence homology in the extracellular domains, their intracellular domains lack sequence homology, suggesting that they differ in their internal signal transduction pathways.
TNF Receptor I contains an approximately 80 amino acid death domain near its carboxy terminus capable of transmitting an apoptotic signal through its interaction with TRADD (TNF Receptor I associated death domain protein), and subsequent interactions with FADD. TNF Receptor I can also activate the transcription factor NFkB via TRAF2 (TNF Receptor associated factor 2). The cytoplasmic domain of TNF Receptor I can directly interact with Jak kinase, thereby activating the JAK/STAT signal transduction cascade.
TNF Receptor I is expressed by virtually all nucleated mammalian cells, including hepatocytes, monocytes and neutrophils, cardiac muscle cells, endothelial cells, and CD34 + hematopoietic progenitors. Both TNF alpha and TNF beta bind to TNF Receptor I.

Uniprot ID: P19438

NCBI: 9606

Host / Isotype: Mouse / IgG2a

Clone: H398

Immunogen: Recombinant Human Tumor Necrosis Factor Receptor type 1.
Spleen cells from immunised BALB/c mice were fused with cells of the mouse NSO myeloma cell line.

Format:
State: Lyophilized purified IgG fraction
Purification: Affinity Chromatography on Protein G
Buffer System: PBS, pH 7.4 containing 0.09% Sodium Azide as preservative and 1% BSA as stabilizer
Label: PE – R. Phycoerythrin (RPE)
Reconstitution: Restore with 1 ml distilled water

Applications: **Flow Cytometry:** Use 10 µl of neat antibody to label 10e6 cells or 100 µl whole blood.
Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.

Specificity: This antibody recognizes an extracellular domain of the 55kD TNF receptor (p55, TNF-R1, CD120a).
No binding occurs to the 75kD TNF receptor (CD120b).
This product is routinely tested in Flow Cytometry on Human peripheral blood monocytes.
Species: Human, Rabbit.
Other species not tested.

Storage: Store the antibody undiluted (Prior to and following reconstitution) at 2-8°C.
DO NOT FREEZE!
This product is photosensitive and should be protected from light.
Shelf life: one year from despatch.

General References:

1. Thoma, B. et al. (1990) Identification of a 60kDa tumour necrosis factor (TNF) receptor as the major signal transducing component in TNF responses. J. Exp. Med. 172: 1019-1023.
2. Menegazzi, R. et al. (1994) Evidence that tumour necrosis factor alpha (TNF)-induced activation of neutrophil respiratory burst on biologic surfaces is mediated by the p55 TNF receptor. Blood 84: 287-293.
3. Dri, P. et al. (1999) Role of the 75-kDa TNF receptor in TNF-induced activation of neutrophil respiratory burst. J. Immunol. 162: 460-466.
4. Kohrgruber, N. et al. (1999) Survival, maturation, and function of CD11c- and CD11c+ peripheral blood dendritic cells are differentially regulated by cytokines. J Immunol. 163:3250-3259.
5. Weigart, N. et al. (1996) Gastrin secretion from primary cultures of rabbit antral G cells; stimulation by inflammatory cytokines. Gasteroenterology. 110: 147-154.
6. Kennedy, G. et al. (2010) Biochemical and vascular aspects of pediatric chronic fatigue syndrome. Arch Pediatr Adolesc Med. 164: 817-23.