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ProductInformation

Anti-mouse Tumor Necrosis Factor soluble Receptor II (sTNF RII)
produced in goat, affinity isolated antibody

Product Number **T2440**

Product Description

Anti-mouse Tumor Necrosis Factor Soluble Receptor II (TNF sRII) is developed in goat using a recombinant mouse TNF sRII, expressed in *E. coli* as immunogen. The antibody is purified using mouse TNF sRII affinity chromatography.

The antibody may be used to detect mouse TNF sRII by immunoblotting and ELISA. By immunoblotting and ELISA, the antibody shows <15% cross-reactivity with recombinant human TNF-sRII.

TNF RII (p75, CD120b) is a 75 kDa transmembrane glycoprotein originally isolated from a human lung fibroblast library.[1] Among the multitude of cells known to express TNFRII are monocytes,[2] endothelial cells,[3] Langerhans cells,[4] and macrophages.[5] Mouse to human amino acid sequence identity in the TNFRII cytoplasmic domain is 73%, while amino acid sequence identity in the extracellular region falls to 58%.[6] This drop in extracellular identity is reflected in the observation that human TNF-∀ is not active in the mouse system.[6] TNF RII to TNF RI, amino acid sequence identity is only about 20% in the extracellular region and 5% in the cytoplasmic domain.[6] TNF RII consists of a 240 amino acid residue extracellular region, a 27 amino acid residue transmembrane segment and a 173 amino acid residue cytoplasmic domain.[7,8] TNF R1 and TNF R2 are members of a family of structurally related membrane receptors that includes lymphotoxin receptor, Fas, WSL-1, DR4, CD40, CD30, CD27, 4-1BB, OX40, and p75 nerve growth factor receptor.[9] Members of the TNFR family can interact through their cytoplasmic domains with a range of intracellular signalling proteins, most of which fall into two distinct groups. The first is the death domain-containing proteins, including TRADD, FADD/MORT1, and RIP, which associate directly with receptors also containing death domains, such as TNF R1 and Fas.[10-12] The second is the TRAF proteins. TRAF1 and TRAF2 were originally identified by their association with the cytoplasmic domain of TNFR2.[13] TRAF proteins appear to function as adaptor proteins. TRAF2 directly binds at least eight intracellular molecules, including TRAF1, c-IAP1, c-IAP2, I-TRAF/TANK, A20, TRIP, RIP, and NIK.[13-20] The best characterized TRAF-mediated signal transduction pathway is the activation of NF-B transcription factors. TRAF2 mediates NF-B activation via the recruitment of the serine/threonine kinase NIK,[20] which can in turn activate CHUK, an IB-specific kinase that triggers IB degradation.[21,22] In addition to recruiting mediators of NF-B activation, TRAF2 can bind at least three other molecules (I-TRAF/TANK, A20, TRIP) that inhibit its ability to activate NF-B.[16-18]

Reagent

The antibody is supplied lyophilized from a 0.2 µm filtered solution in phosphate buffered saline.

Preparation Instructions

To one vial of lyophilized powder, add 1 mL of 0.2 µm filtered PBS to produce a 0.1 mg/mL stock solution of antibody. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

Storage/Stability

Prior to reconstitution, store at –20 °C. Reconstituted product may be stored at 2-8 °C for at least one month. For prolonged storage, freeze in working aliquots at –20 °C. Avoid repeated freezing and thawing.

Product Profile

For immunoblotting, a working concentration of 0.1-0.2 µg/mL is determined using recombinant mouse TNF sRII at 5 ng/lane under non-reducing and reducing conditions.

For ELISA, a working concentration of 0.5-1 µg/mL is determined to detect recombinant mouse TNF sRII to a limit of 0.16 ng/well.

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working dilutions by titration test.

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