

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Lymphotoxin- α /TNF- β in Western blots. In Western blots, approximately 5% cross-reactivity with recombinant human Lymphotoxin- α /TNF- β is observed (non-reducing conditions).
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant mouse Lymphotoxin- α /TNF- β
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

	Recommended Concentration	Sample
Western Blot	0.1 μ g/mL	Recombinant Mouse Lymphotoxin- α /TNF- β
Immunohistochemistry	5-15 μ g/mL	Perfusion fixed frozen sections of mouse thymus

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. 12 months from date of receipt, -20 to -70 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

Tumor necrosis factor-beta (TNF- β), also known as lymphotoxin-alpha (LT- α), is a secreted homotrimeric glycoprotein belonging to the TNF superfamily and is designated TNFSF1B. It is produced by NK, T, and B cells. TNF- β was originally identified as protein that kills tumor cells in cell culture supernatants of a lymphoblastoid cell line. The TNF- β subunit also associates with the type II transmembrane TNF superfamily protein lymphotoxin beta (LT β) to generate two types of heterotrimers designated as LT α 1 β 2 (a single TNF- β chain non-covalently associated with two chains of LT β), and LT α 2 β 1 (1, 2). TNF- α , TNF- β , and LT β form a subfamily of the TNF related ligands. Their genes are genetically linked within a compact cluster inside the major histocompatibility complex locus (2, 3). The soluble TNF- β binds and signals through TNF R1 and TNF R2. In contrast, the membrane-bound LT α 1 β 2 interacts specifically with the LT β receptor (LT β R), which does not bind TNF- β or TNF- α . Both TNFR1 and TNFR2 bind LT α 2 β 1, which is recognized weakly by LT β R (4, 5). TNF R1 and 2 express very broadly, while expression of LT β R is restricted to stromal cells of lymphoid tissues. Herpesvirus entry mediator binds TNF- β in vitro (6). The physiological importance of such interaction, if it occurs *in vivo*, is unclear. Distinct functions attributed to TNF- β from transgenic knock-out mice include, loss of lymph node development, change in splenic architecture, impaired germinal center formation, and susceptibility to pulmonary tuberculosis (7, 8). TNF- β also has overlapping physiological functions with LT β and TNF- α in lymphoid organogenesis (7). Mouse and human TNF- β share approximately 74% homology in their amino acid sequence.

References:

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