

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse IL-18 BPd in direct ELISAs and Western blots.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse IL-18 BPd Thr27-Ala191 Accession # AAD17194
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

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 µg/mL	Recombinant Mouse IL-18 BPd Fc Chimera (Catalog # 122-BP)
Neutralization	Measured by its ability to neutralize IL-18 BPd inhibition of IL-18/IL-1F4-induced IFN-γ secretion in activated mouse T cells. The Neutralization Dose (ND ₅₀) is typically 10-30 µg/mL in the presence of 2 µg/mL Recombinant Mouse IL-18 BPd Fc Chimera, 0.5 ng/mL Recombinant Mouse IL-18/IL-1F4, and 0.1 ng/mL Recombinant Mouse IL-12.	
ELISA	This antibody functions as an ELISA detection antibody when paired with Rat Anti-Mouse IL-18 BPd Monoclonal Antibody (Catalog # MAB122). <i>This product is intended for assay development on various assay platforms requiring antibody pairs. We recommend the Mouse IL-18 BPd DuoSet ELISA Kit (Catalog # DY122-05) for convenient development of a sandwich ELISA.</i>	

DATA

Neutralization

IL-18 BPd Inhibition of IL-18/IL-1F4-induced IFN-γ Secretion and Neutralization by Mouse IL-18 BPd Antibody. Recombinant Mouse IL-18 BPd Fc Chimera (Catalog # 122-BP) inhibits Recombinant Mouse IL-18/IL-1F4 induced IFN-γ secretion in activated mouse T cells in a dose-dependent manner (orange line), as measured by the Mouse IFN-gamma Quantikine ELISA Kit (Catalog # MIF00). Inhibition of Recombinant Mouse IL-18/IL-1F4 (0.5 ng/mL) activity elicited by Recombinant Mouse IL-18 BPd Fc Chimera (2 µg/mL) is neutralized (green line) by increasing concentrations of Goat Anti-Mouse IL-18 BPd Antigen Affinity-purified Polyclonal Antibody (Catalog # AF122). The ND₅₀ is typically 10-30 µg/mL in the presence of Recombinant Mouse IL-12 (0.1 ng/mL).

ELISA

Mouse IL-18 BPd ELISA Standard Curve. Recombinant Mouse IL-18 BPd protein was serially diluted 2-fold and captured by Rat Anti-Mouse IL-18 BPd Monoclonal Antibody (Catalog # MAB122) coated on a Clear Polystyrene Microplate (Catalog # DY990). Goat Anti-Mouse IL-18 BPd Antigen Affinity-purified Polyclonal Antibody (Catalog # AF122) was biotinylated and incubated with the protein captured on the plate. Detection of the standard curve was achieved by incubating Streptavidin-HRP (Catalog # DY998) followed by Substrate Solution (Catalog # DY999) and stopping the enzymatic reaction with Stop Solution (Catalog # DY994).

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. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 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

Interleukin 18 binding protein (IL-18 BP) is a secreted glycoprotein, which functions as an IL-18 antagonist by binding to IL-18 and blocking its biological activity. IL-18 BP bears no amino acid sequence homology to the membrane-associated IL-18 and IL-1 receptor proteins. The gene for human IL-18 BP has been localized to chromosome 11q13. It encodes for at least four isoforms by alternative splicing. The IL-18 BP isoforms a and c each contain one immunoglobulin (Ig)-like C2-type domain while isoforms b and d lack a complete Ig domain. The complete Ig domain has been shown to be essential to the binding and neutralizing properties of the binding proteins. Two isoforms of mouse IL18 BP (c and d) containing the complete Ig domain have also been isolated and shown to neutralize IL-18 bioactivity. Human and mouse IL-18 BPs share approximately 61% amino acid sequence identity. Several poxviruses also encode proteins with sequence similarity to the human and mouse IL-18 BP. Viral IL-18 BPs have been shown to bind and inhibit IL-18 responses and may be involved in modulating host immune responses. The expression of IL-18 BP is markedly up-regulated by IFN- γ , suggesting that IL-18 activity is modulated by a negative feedback mechanism mediated by IL-18 BP.

References:

1. Muh, H. *et al.* (2000) *Biochem. Biophys. Res. Commun.* **267**:960.
2. Kim, S-H. *et al.* (2000) *Proc. Nat. Acad. Sci. USA* **97**:1190.
3. Calderara, S. *et al.* (2001) *Virology* **279**:22.