

Rat IL-12 Antibody Pair Set

Catalog No. E-KAB-0377

Applications

ELISA

Synonyms IL12, IL-12 p70, IL12 p70

Kit components & Storage

Title	Specifications	Storage
Rat IL-12 Capture Antibody	1 vial, 100 µg	Store at -20°C for one year. Avoid freeze / thaw cycles.
Rat IL-12 Detection Antibody (Biotin)	1 vial, 50 µL	Store at -20°C for one year. Avoid freeze / thaw cycles.

Note: Centrifuge before opening to ensure complete recovery of vial contents.

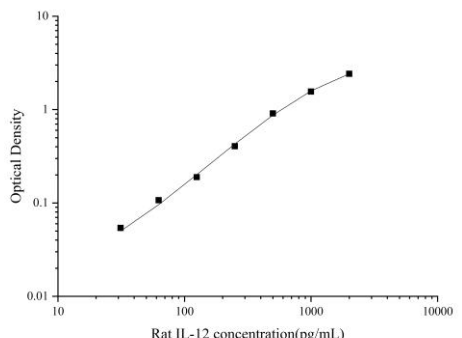
Product Information

Items		Characteristic (E-KAB-0377)	
		Rat IL-12 Capture Antibody	Rat IL-12 Detection Antibody (Biotin)
Immunogen Information	Immunogen	Recombinant Rat IL-12 protein	Recombinant Rat IL-12 protein
	Swissprot	E9PU71	
Product details	Reactivity	Rat	Rat
	Host	Rabbit	Rabbit
	Conjugation	Unconjugated	Biotin
	Concentration	0.5mg/mL	/
	Buffer	PBS with 0.04% Proclin 300, 50% glycerol, pH 7.4	PBS with 0.04% Proclin 300, 1% protective protein, 50% glycerol, pH 7.4
	Purify	Antigen Affinity	Antigen Affinity
	Specificity	Detects Rat IL-12 in ELISAs.	

For Research Use Only

Applications

Rat IL-12 Sandwich ELISA Assay:

	Recommended Concentration/Dilution	Reagent	Images										
ELISA Capture	0.5-4µg/mL	Rat IL-12 Capture Antibody	 <p>The graph displays a standard curve for the Rat IL-12 Sandwich ELISA Assay. The x-axis represents Rat IL-12 concentration in pg/mL on a logarithmic scale from 10 to 10,000. The y-axis represents Optical Density on a logarithmic scale from 0.01 to 10. The data points form a straight line, indicating a linear relationship between the concentration of Rat IL-12 and the resulting optical density.</p> <table border="1"> <caption>Approximate data points from the standard curve</caption> <thead> <tr> <th>Rat IL-12 concentration (pg/mL)</th> <th>Optical Density</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>0.05</td> </tr> <tr> <td>100</td> <td>0.2</td> </tr> <tr> <td>1000</td> <td>0.8</td> </tr> <tr> <td>10000</td> <td>3.0</td> </tr> </tbody> </table>	Rat IL-12 concentration (pg/mL)	Optical Density	10	0.05	100	0.2	1000	0.8	10000	3.0
Rat IL-12 concentration (pg/mL)	Optical Density												
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10000	3.0												
ELISA Detection	1:1000-1:10000	Rat IL-12 Detection Antibody (Biotin)											

Note: This standard curve is only for demonstration purposes. A standard curve should be generated for each assay!

Background

Heterodimerizes with IL12B to form the IL-12 cytokine or with EBI3/IL27B to form the IL-35 cytokine. IL-12 is primarily produced by professional antigen-presenting cells (APCs) such as B-cells and dendritic cells (DCs) as well as macrophages and granulocytes and regulates T-cell and natural killer-cell responses, induces the production of interferon-gamma (IFN-gamma), favors the differentiation of T-helper 1 (Th1) cells and is an important link between innate resistance and adaptive immunity. Mechanistically, exerts its biological effects through a receptor composed of IL12R1 and IL12R2 subunits. Binding to the receptor results in the rapid tyrosine phosphorylation of a number of cellular substrates including the JAK family kinases TYK2 and JAK2. In turn, recruited STAT4 gets phosphorylated and translocates to the nucleus where it regulates cytokine/growth factor responsive genes. As part of IL-35, plays essential roles in maintaining the immune homeostasis of the liver microenvironment and functions also as an immune-suppressive cytokine. Mediates biological events through unconventional receptors composed of IL12RB2 and gp130/IL6ST heterodimers or homodimers. Signaling requires the transcription factors STAT1 and STAT4, which form a unique heterodimer that binds to distinct DNA sites.