

## Mouse IL-4 Antibody Pair Set

|                    |                             |                     |       |
|--------------------|-----------------------------|---------------------|-------|
| <b>Catalog No.</b> | E-KAB-0549                  | <b>Applications</b> | ELISA |
| <b>Synonyms</b>    | IL4;BCGF-1;BCGF1;BSF-1;BSF1 |                     |       |

### Kit components & Storage

| Title                                  | Specifications | Storage   |
|--|----------------|---|
| Mouse IL-4 Capture Antibody            | 1 vial, 100 µg | Store at -20°C for one year.<br>Avoid freeze/thaw cycles. |
| Mouse IL-4 Detection Antibody (Biotin) | 1 vial, 50 µL  | Store at -20°C for one year.<br>Avoid freeze/thaw cycles. |

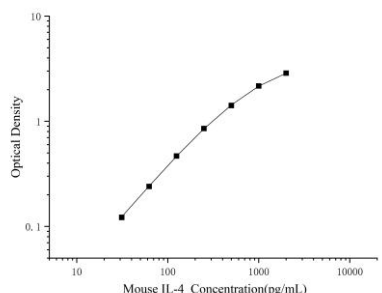
**Note:** Centrifuge before opening to ensure complete recovery of vial contents.

### Product Information

| Items                 |               | Characteristic (E-KAB-0549)                      |   |
|-----------------------|---------------|--|---|
|                       |               | Mouse IL-4 Capture Antibody                      | Mouse IL-4 Detection Antibody (Biotin)                                  |
| Immunogen Information | Immunogen     | Recombinant Mouse IL-4 protien                   | Recombinant Mouse IL-4 protien  |
|                       | Swissprot     | P07750   |   |
| Product details       | Reactivity    | Mouse  | Mouse   |
|                       | Host          | Rat  | Rat   |
|                       | Conjugation   | Unconjugated                                     | Biotin  |
|                       | Concentration | 0.5 mg/mL  | /   |
|                       | Buffer        | PBS with 0.04% Proclin 300; 50% glycerol; pH 7.5 | PBS with 0.04% Proclin 300; 1% protective protein; 50% glycerol; pH 7.5 |
|                       | Purify        | Protein A or G                                   | Protein A or G  |
|                       | Specificity   | Detects Mouse IL-4 in ELISAs.                    |   |

## Applications

Mouse IL-4 Sandwich ELISA Assay:

|                                  | Recommended Concentration/Dilution | Reagent                                | Images   |                                  |                 |    |      |     |     |      |     |       |     |
|----------------------------------|------------------------------------|--|--|----------------------------------|-----------------|----|------|-----|-----|------|-----|-------|-----|
| ELISA Capture                    | 0.5-4 µg/mL                        | Mouse IL-4 Capture Antibody            |  <p>The graph is a log-log plot of Optical Density versus Mouse IL-4 Concentration (pg/mL). The x-axis ranges from 10 to 10,000 pg/mL, and the y-axis ranges from 0.1 to 10. The data points form a smooth, upward-sloping curve, indicating a positive correlation between concentration and optical density.</p> <table border="1"> <caption>Approximate data points from the standard curve</caption> <thead> <tr> <th>Mouse IL-4 Concentration (pg/mL)</th> <th>Optical Density</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>0.15</td> </tr> <tr> <td>100</td> <td>0.5</td> </tr> <tr> <td>1000</td> <td>1.5</td> </tr> <tr> <td>10000</td> <td>3.5</td> </tr> </tbody> </table> | Mouse IL-4 Concentration (pg/mL) | Optical Density | 10 | 0.15 | 100 | 0.5 | 1000 | 1.5 | 10000 | 3.5 |
| Mouse IL-4 Concentration (pg/mL) | Optical Density                    |  |  |                                  |                 |    |      |     |     |      |     |       |     |
| 10                               | 0.15                               |  |  |                                  |                 |    |      |     |     |      |     |       |     |
| 100                              | 0.5                                |  |  |                                  |                 |    |      |     |     |      |     |       |     |
| 1000                             | 1.5                                |  |  |                                  |                 |    |      |     |     |      |     |       |     |
| 10000                            | 3.5                                |  |  |                                  |                 |    |      |     |     |      |     |       |     |
| ELISA Detection                  | 1:1000-1:10000                     | Mouse IL-4 Detection Antibody (Biotin) |  |                                  |                 |    |      |     |     |      |     |       |     |

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

## Background

Cytokine secreted primarily by mast cells, T-cells, eosinophils, and basophils that plays a role in regulating antibody production, hematopoiesis and inflammation, and the development of effector T-cell responses. Induces the expression of class II MHC molecules on resting B-cells. Enhances both secretion and cell surface expression of IgE and IgG1. Regulates also the expression of the low affinity Fc receptor for IgE (CD23) on both lymphocytes and monocytes. Positively regulates IL31RA expression in macrophages. Stimulates autophagy in dendritic cells by interfering with mTORC1 signaling and through the induction of RUFY4. In addition, plays a critical role in higher functions of the normal brain, such as memory and learning. Upon binding to IL4, IL4R receptor dimerizes either with the common IL2R gamma chain/IL2RG to produce the type 1 signaling complex, located mainly on hematopoietic cells, or with the IL13RA1 to produce the type 2 complex, which is expressed also on nonhematopoietic cells. Engagement of both types of receptors initiates JAK3 and to a lower extent JAK1 phosphorylation leading to activation of the signal transducer and activator of transcription 6/STAT6.