



Mouse IL-2 Panel (Flow Cytometry Bead Assay)

Please read this manual carefully before performing the experiment.

For research use only, not for use in diagnostic or therapeutic procedures.

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【Intended Use】

Mouse IL-2 Panel (Flow Cytometry Bead Assay) gives quantitative results of Interleukin-2 (IL-2) with a sample testing. The performance of this panel has been optimized for specific analysis of cytokines in mouse serum samples.

The characteristic combination provides sufficient reagents for the quantitative analysis of 50 tests.

【Background】

Cytokine plays an important role in physiological and pathological processes such as immune regulation, inflammatory response and tumor metastasis. Cytokine detection was widely used in infectious disease, autoimmune disease, tumor auxiliary diagnosis, disease evaluation, medication guidance and prognosis judgment.

Interleukin-2 (IL-2) is an interleukin, a type of cytokine immune system signaling molecule, which is a leukocytotropic hormone that is instrumental in the body's natural response to microbial infection and in discriminating between foreign (non-self) and self. IL-2 mediates its effects by binding to IL-2 receptors, which are expressed by lymphocytes, the cells that are responsible for immunity. Mature human IL-2 shares 56% and 66% aa sequence identity with mouse and rat IL-2, respectively. Human and mouse IL-2 exhibit crossspecies activity. The receptor for IL-2 consists of three subunits that are present on the cell surface in varying preformed complexes. IL-2 is also necessary during T cell development in the thymus for the maturation of a unique subset of T cells that are termed regulatory T cells (T-regs). After exiting from the thymus, T-Regs function to prevent other T cells from recognizing and reacting against "self antigens", which could result in "autoimmunity". T-Regs do so by preventing the responding cells from producing IL-2. Thus, IL-2 is required to discriminate between self and non-self, another one of the unique characteristics of the immune system.

【Product Details】

Format	50T
Reactivity	Mouse
Regulatory Status	RUO
Sensitivity (LOD)	3.82 pg/mL
Standard Curve Range	9.8 - 10000 pg/mL
Assay Time	2.5 hr
Suitable Sample Type	mouse serum
Sample volume	30 μ L
Interference	No significant interference observed with mouse IL-4,IL-6,IL-10,TNF- α ,IFN- γ

【Product】

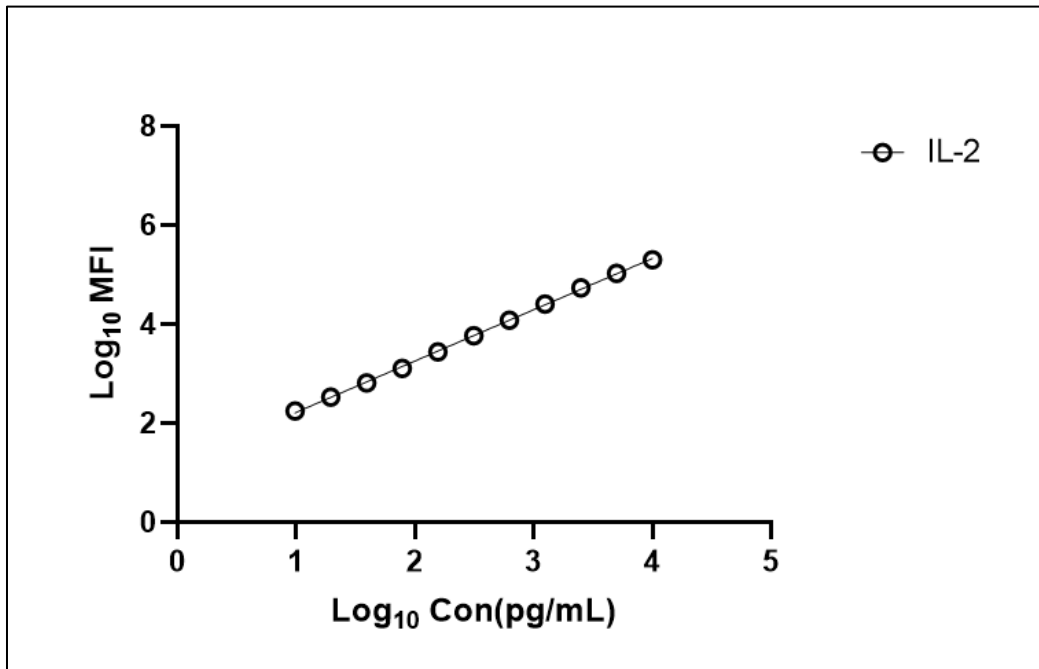
Recommended Products For 50 Tests

Product	Cat. No.	Size	Format	Storage (Unopened)	Storage (Opened)	Intended use
Anti-mouse IL-2 Antibody-coupled APC-beads-B06	FMBc006-02	50 tests	Beads suspension	2-8 °C, avoid light	2-8 °C, avoid light	Capture Beads
Mouse IL-2 Protein, His Tag	IL2-M52H3	100 µg	Powder	-20°C to -70°C	-70 °C	Calibrator
Biotinylated Monoclonal Anti-Mouse IL-2 Antibody, Rat IgG2a (AS541)	FABr014-B	0.25 mL	Liquid	2-8 °C, avoid light	2-8 °C, avoid light	Detection Antibody
Streptavidin Protein-PE	STN-NP119	100 µg	Powder	-20°C to -70°C for 24 months in lyophilized state	-20°C for 6 months after reconstitution; 2-8 °C for 6 months under sterile conditions after reconstitution	SA-PE Solution
Assay Buffer-01	FCMB-03	50 mL	Liquid	2-8 °C	2-8 °C	Assay Buffer
Wash Buffer-01	FCMB-04	50 mL	Liquid	2-8 °C	2-8 °C	Wash Buffer
96-Well V-Bottom Assay Plate	FCMP-01	1 plate	Solid	RT	RT	
96-well Sealing Film	FCMP-02	2 pieces	Solid	RT	RT	
PE Positive Control-01	FMBf001-01	0.5 mL	Beads suspension	2-8 °C, avoid light	2-8 °C, avoid light	Voltages Setting
APC Positive Control-01	FMBf001-02	0.5 mL	Beads suspension	2-8 °C, avoid light	2-8 °C, avoid light	Voltages Setting

【Storage and Expiration】

1. Follow the recommended storage conditions for each reagent.
2. Do not use reagents beyond expiration date.
3. Antibody-coupled APC-beads, Biotinylated Monoclonal Anti-Mouse IL-2 Antibody, Assay Buffer, Wash Buffer, PE Positive Control and APC Positive Control are 30 days from the date of opening.

【Typical Data】



【Performance】

1. Limit of Detection

LOB	3.40 pg/mL
LOD	3.82 pg/mL

2. Recovery

Mouse IL-2 protein was spiked into the mouse serum samples at three different concentrations (7500 pg/mL, 312.5 pg/mL, 25 pg/mL). The results of spiked samples were compared with the expected values as follows, the recoveries were fallen in 80-120% approximately.

Samples	Spike concentration (pg/mL)	Recovery
Serum 1	25	93%
	312.5	102%
	7500	116%
Serum 2	25	90%
	312.5	99%
	7500	119%
Serum 3	25	85%
	312.5	97%
	7500	120%
Serum 4	25	90%
	312.5	98%
	7500	120%
Serum 5	25	77%
	312.5	90%
	7500	117%
Mean Recovery		101%

3. Specificity

This assay recognizes natural and recombinant mouse IL-2. No cross-reactivity was observed between the mouse IL-2 and the following recombinant cytokines.

Mouse
IL-4
IL-6
IL-10
TNF- α
IFN- γ