cellsciences.com

Human IL-1β (PeliKine compact™) ELISA Kit

Catalog No: M1934 **Size:** 3 x 96 tests

Introduction:
Bioassays for the quantification of IL-1a or IL-1b, based on the induction of IL-2 production by T cell lines or proliferation of T-cell lines have been used for several years. These assays, although sensitive, are time consuming and might be susceptible to interference by other substances.

This PeliKine compact™ IL-1ß ELISA has been developed for faster, more reproducible and specific quantification of human IL-1b (huIL-1b) in serum and culture supernatant.

The PeliKine compact™ human IL-1b (IL-1b) ELISA kit is a "sandwich-type" of enzyme immunoassay in which a monoclonal anti- IL-1b antibody is bound onto polystyrene microtiter wells. Human IL-1b, present in a measured volume of sample or standard is captured by the antibody on the microtiter plate, and non-bound material is removed by washing. Subsequently, a biotinylated second monoclonal antibody to IL-1b is added. This antibody binds to the IL-1b antibody complex present in the microtiter well. Excess biotinylated antibody is removed by washing, followed by addition of a polymer of horseradish peroxidase conjugated to streptavidin (streptavidin poly-HRP), which binds onto the biotinylated side of the IL-1b sandwich. After removal of non-bound HRP conjugate by washing, a substrate solution is added to the wells. A colored product is formed in proportion to the amount of IL-1b present in the sample or standard. After the reaction has been terminated by the addition of a stop solution, absorbance is measured in a microtiter plate reader. From the absorbance of samples and those of a standard curve, the concentration of IL-1b can be determined by interpolation with the standard curve.

CONTENTS OF THE KIT

Item	Quantity	Kit Component	Volume	Cap Color
M1934-A	1 vial	Coating antibody, 100X	375 µl	red
M1934-B	1 vial	Blocking reagent, 50X	2 ml	transparent
M1934-C	1 vial	IL-1β standard, 2300 pg/ml	500 µl	black
M1934-D	1 vial	Biotinylated IL-1β antibody, 100X	375 µl	yellow
M1934-E	1 vial	Streptavidin-poly-HRP-conjugate, 10,000X	20 µl	brown
M1934-F	1 bottle	HPE-dilution buffer, 5X	60 ml	-
M1934-P	3	Microtiter plate + lid	-	-
M1934-S	10	Plate seals	-	-

Cell Sciences, Inc.
65 Parker Street
Unit 11
Newburyport, MA 01950

Toll Free: 888 769-1246
Phone: 978-572-1070
Fax: 978-992-0298

E-mail: info@cellsciences.com
Web Site: www.cellsciences.com

Sensitivity:

MEAN calculated zero signal + 3 SD :	0.8 – 1.5 pg/ml (shake – static incubation)
2x (MEAN calculated zero signal) :	2.5 – 4.0 pg/ml (shake – static incubation)

Expected Values:

IL-1β values in fresh serum and plasma samples of healthy individuals are below 5 pg/ml.

Specificity:

No cross reactivity was observed with the following recombinant human proteins: IL-1α, IL-2, IL-3, IL-4, IL-5, IL-6, sIL-6r, IL-7, IL-8, IL-9, IL-10, IL-11, IL-13, Macrophage Colony Stimulating Factor (M-CSF), Granulocyte Colony Stimulating Factor (G-CSF), Granulocyte/Macrophage Colony Stimulating Factor (GM-CSF), Leukemia Inhibitory Factor (LIF), RANTES, Stem Cell Factor/ Mast Cell Factor (SCF/MCF), Transforming Growth Factor ß-1 (TGFß-1), Tumor Necrosis Factor α (TNF-α), TNF ß (Lymphotoxin), and Interferon γ (IFNγ).

Standard:

The kit contains one lyophilized vial with 2300 pg/ml natural human IL-1ß. Reconstitute the lyophilized standard by adding 500 ul of distilled water to the vial. Incubate for 10 minutes at room temperature and mix gently. After reconstitution the standard must be kept cold (2-8°C) and stored frozen after use (<-18°C, preferably <-70°C).

Standard Curve:

Label 7 tubes, one tube for each dilution: 300, 100, 33, 11, 3.6, 1.2 and 0.4 pg/ml.
Pipette 400 µl of working-strength dilution buffer into the tube labeled 300 pg/ml and 300 µl of working strength dilution buffer into the other tubes.
Transfer 60 µl of the IL-1ß standard (2300 pg/ml) into the first tube labeled 300 pg/ml, mix well and transfer 150 µl of this dilution into the second tube labeled 100 pg/ml.
Repeat the serial dilutions five more times by adding 150 µl of the previous tube of diluted standard to the 300 µl of dilution buffer.

The standard curve will contain 300, 100, 33, 11, 3.6, 1.2 and 0.4 pg/ml (dilution buffer).
It is recommended it prepare two separate series for each assay.

Samples:

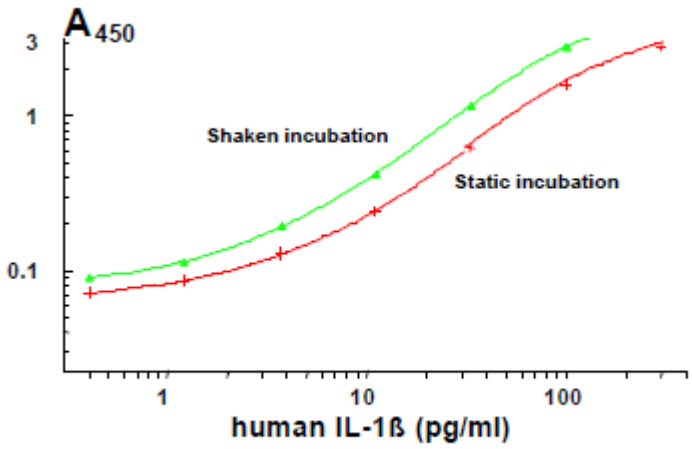
It is recommended to dilute the test samples at least 1:2 in working-strength dilution buffer. If high levels of IL-1β (outside the standard curve) are expected in the test samples, additional dilutions of sample i.e. 1:10 and 1:50 should also be prepared.

Cell Sciences, Inc.
65 Parker Street
Unit 11
Newburyport, MA 01950

Toll Free: 888 769-1246
Phone: 978-572-1070
Fax: 978-992-0298

E-mail: info@cellsciences.com
Web Site: www.cellsciences.com

Typical Standard Curve:



Typical standard curve for the PeliKine compact™ human IL-1ß ELISA kit

	STATIC INCUBATION	SHAKEN INCUBATION
	Calculated mean absorbance at 450 nm	
substrate blank	0	0
0 pg/ml	0.025	0.024
0.4 pg/ml	0.076	0.029
1.2 pg/ml	0.041	0.052
3.7 pg/ml	0.083	0.125
11 pg/ml	0.198	0.340
33 pg/ml	0.582	1.033
100 pg/ml	1.558	2.582
300 pg/ml	2.777	> 3.000

DO NOT USE THESE DATA TO CONSTRUCT A STANDARD CURVE FOR SAMPLE VALUE CALCULATIONS

NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.

Cell Sciences, Inc.
65 Parker Street
Unit 11
Newburyport, MA 01950

Toll Free: 888 769-1246
Phone: 978-572-1070
Fax: 978-992-0298

E-mail: info@cellsciences.com
Web Site: www.cellsciences.com