

PRODUCT INFORMATION SUMMARY

Rat IL-1 Beta ELISA Construction Kit

Product Number RRF11120CK
Approx. 960 tests

Product Number **RRF11120CKC**
With Developing Reagents:

Capture Antibody 100.0 or 200.0ug	ELISA Coating Stabilizer 50 mL
Biotin-Labeled tracer 25.0 ug	Streptavidin-HRP 1.0mL
Antigen Standard 1.0 or 2.0 ug	TMB Substrate (50 mL x 2)
	WASH Buffer (20X) 100 mL

DESCRIPTION:

Rat IL-1 Beta ELISA CONSTRUCTION Kit provides antigen affinity purified polyclonal capture and tracer antibodies, and antigen standard for development of **approximately** ten microplate assays. Working concentrations must be optimized by customer.

Note: Reconstitute components only when ready to run assay.

CAPTURE ANTIBODY:

Provided as lyophilized, 100.0 or 200.0 ug (**see vial**), additive-free. Reconstitute in 1.0 mL sterile water (100.0 or 200.0 ug/mL)). (FREEZE aliquots for long-term storage)

TRACER ANTIBODY:

Provided as 25 ug (lyophilized)or as **0.5 mL liquid @ 50.0 ug/mL (see vial)** of Biotin labeled, antigen-affinity purified antibody, additive-free. Reconstitute the 25 ug (lyophilized vial) in 500 uL sterile water **containing 0.1% BSA.** (FREEZE aliquots for long-term storage). -

****For liquid vial store refrigerated only (contains preservative)**.**

STANDARD: Provided as 1.0 ug or 2.0 ug (**see vial**) of recombinant Rat Il-1 Beta. Quick-spin and reconstitute in 30 uL of sterile water (pH 7.2). Further dilutions can be made in 0.05% Tween-20, 0.1% BSA in PBS.

DEVELOPING REAGENTS: Supplied with catalog # ending in "CKC".

- ELISA Coating/ Blocking Reagent (EA150C) 50.0 mL (5X Solution)
- Streptavidin-HRP (S100180C) 1.0 mL - store @ -20 Deg. C.
- TMB Substrate Solutions - Part A and Part B (50.0 mL each) cat # ES200C
- WASH Buffer (20X) Dilute 1 part with 19 parts distilled water

HANDLING/ STORAGE: Reconstitute reagents when ready to build ELISA assay. Antibodies Capture can be stored for approximately one month at 4 Degrees C. Or store **frozen** at -20 Degrees C. for up to 6 months. Standard (rec. Rat IL-1 Beta) can be stored in liquid state (@ 4 Deg. C.) For up to one week, or store **frozen, with addition of 0.1%BSA,** at -20 Deg. C. for up to 2 months. AVOID repeat freeze-thaw.

For Biotin Tracer provided as liquid (0.5 mL) -STORE refrigerated-contains preservative.

MATERIALS RECOMMENDED:

ELISA Microplates: Nunc Maxisorp, Prod. # 4420404
Tween -20.
BSA
Streptavidin-HRP: ANTIGENIX Cat no. **S100180** or similar
TMB Substrate : ANTIGENIX cat # **ES200** or similar
Dubelco's PBS (10X)
ANTIGENIX **ELISA Coating Stabilizer** (cat no: **EA150**)

RECOMMENDED SOLUTIONS:

See ANTIGENIX Developing reagents above.

PBS: Dilute to 1XPBS in sterile water
WASH BUFFER: ANTIGENIX WB200 or 0.05% Tween-20 in PBS.
BLOCK BUFFER: **use ANTIGENIX AMERICA coating stabilizer - recommended! (EA150) or 1% BSA** in PBS
Substrate Solution: TMB Substrate Solution (cat # **ES200**)
Diluent: 0.05% Tween-20, 0.1% BSA in PBS
2N Sulfuric acid (stop solution)

PLATE PREPARATION:

1. Dilute **portion** of capture antibody with 0.05M Carbonate buffer (or PBS) to concentration 2.0 ug/mL (or 1.0 ug/mL).

Immediately add 100 uL to each ELISA well. Seal the plate and incubate overnight at room temperature.

2. Aspirate wells to remove all liquid and wash **4 times** using 300 uL of wash buffer per well. After last wash, add 200 uL ANTIGENIX AMERICA **ELISA coating stabilizer (cat # EA150)** and incubate for 60 minutes at room temperature. (With coating stabilizer, DO NOT let plate dry prior to use of coating stabilizer. This will **stabilize and Block in one step!** Refer to data sheet EA150 for complete description of use.
3. With ANTIGENIX coating stabilizer (**recommended**) aspirate plate but **DO NOT WASH**. Dry plate in humidity controlled chamber or similar. (see data sheet EA150). With standard block reagent, aspirate plate and wash 3X with 300 uL wash

buffer.

PROTOCOL:

STANDARD/SAMPLE: Dilute **a portion of the** standard (store unused standard in aliquots, high concentration, frozen -20 Deg. C.) from 4.0 ng/mL (**Adjust;** depending on desired range and sensitivity of first standard curve) to zero in diluent (serial dilution). Immediately add 100 uL of standard or sample to each well in duplicate. Incubate at room temp. for approx. 2 hours.

DETECTION: Aspirate and wash plate 4 times. **Dilute** detection (Tracer) antibody in diluent to concentration of **0.20 ug/mL**. Add 100 uL per well. Incubate at room temperature for 1-2 hours. Note: detection antibody can be used in approximate range of 0.10 - 0.50 ug/mL, you may need to optimize for subsequent plates.

STREPTAVIDIN-HRP: Aspirate and wash plate 4 times. **Dilute** Streptavidin-HRP conjugate approx. **1:2,000** in diluent (follow recommended dilution of manufacturer). (May need to optimize) Add 100 uL per well, incubate 30 minutes at room temperature.

SUBSTRATE: Aspirate and wash plate 4 times. Prepare and add 100 uL substrate solution (cat no: ES200)to each well (follow directions for substrate preparation and handling from manufacturer's data sheet). Incubate at room temp. for color development. Monitor color development with plate reader at 650 nm wavelength. (For blue color). Stop the color reaction after 10 - 20 minutes by adding 100 uL of 2N Sulfuric acid to each well. Then, **read plate @ 450 nm**.

NOTE: reliable standard curves are obtained when O.D. readings do not exceed 0.25 units for the zero standard concentration, or 2.0 units for the highest standard concentration. Monitor the plate every 5 minutes for approximately 30 minutes.

X-REACTIVITY DATA:

Minimal (5% or less) X-Reactivity was observed @ 40-50 ng/mL with following factors:

Mouse IL-1 Beta; Human IL-1 Beta

No measurable X-reactivity was observed with following factors:

Rat: TNF alpha; GM-CSF; IL-1 alpha; IL-2, IL-4; IL-10

Mouse: IL-1 alpha; IL-2; IL-4; IL-10

Human: IL-1 alpha; IL-2; IL-2R; IL-4; IL-4R

RESEARCH USE ONLY -NOT For DIAGNOSTIC USE

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