

**Catalog No:** 42400-2

**Lot No:** 7753

**Expiration:** January 31, 2026

Store all components at 2-8°C

Kit Components	Part No.	Lot No.	Quantity
Plate(s)	SMP028	K7666	5
Plate Sealers	N/A	N/A	20
Wash Solution Concentrate	SMP022-250	K7529	250 ml
Mouse IFN-Beta Standard, 500,000 pg/ml	SMP210-2	K7670	1 vial
Dilution Buffer	SMP021-150	K7389	150 ml
Antibody Concentrate	SMP211-2	K7671	1 vial
HRP Conjugate Concentrate	SMP179-1200	K7672	1 vial
Concentrate Diluent	SMP024-150	K7592	150 ml
TMB Substrate Solution	KET-60	220103D02	60 ml
Stop Solution	SCY-60	69099	60 ml

## Product Performance Specifications

Intra-Assay CV	≤ 8%
Inter-Assay CV	≤ 8%

## Authorization

Released by: \_\_\_\_\_

Date: February 10, 2025

**CAUTION:** Wash Solution Concentrate, Dilution Buffer and Concentrate Diluent contain 0.1% Kathon CG/ICP as a preservative and should be handled with appropriate safety precautions and discarded properly. For further information, consult the safety data sheet (SDS).

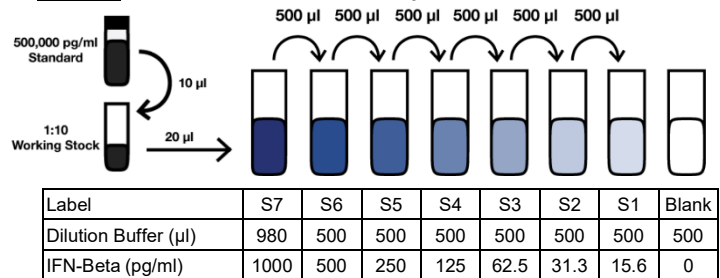
## PREPARATION OF REAGENTS

**Wash Solution:** Wash Solution Concentrate may contain crystals; place in a warm water bath and gently mix until completely dissolved. Prepare a 1:10 working wash solution (e.g. Add 50 ml Wash Solution Concentrate to 450 ml distilled or deionized water). Mix thoroughly before use.

### Mouse IFN-Beta Standard Curve Preparation:

- Label seven polypropylene tubes (S1 – S7).
- Prepare *working stock* by pipetting 10 µl Standard into 90 µl Dilution Buffer or Sample Matrix. Mix thoroughly by gently pipetting up and down 10 times.
- Add indicated volume Dilution Buffer to each tube as indicated in [Figure 1](#).
- Using polypropylene tips, add indicated amount of *working stock* to S7. Use a pipette set at 500 µl and mix thoroughly. Remove indicated amount from S7 and add to S6. Repeat to complete series to S1.

**Figure 1: 7-Point Standard Curve Prepared in Dilution Buffer**



**Sample Preparation:** Thaw frozen sample tubes to Room Temperature (RT) (22-25°C) in either tap water or between the fingertips. If samples require dilution, prepare using Dilution Buffer or Sample Matrix. Keep at RT until use. Measurements in duplicate are recommended.

**Antibody Solution:** 15 minutes prior to use, dilute Antibody Concentrate in volume of Concentrate Diluent shown below. Keep at RT (22-25°C).

Micro-plate Strips Used	2	4	6	8	10	12
Antibody Concentrate (µl)	40	80	120	160	200	240
Concentrate Diluent (ml)	2.0	4.0	6.0	8.0	10.0	12.0

**HRP Solution:** 15 minutes prior to use, dilute HRP Conjugate Concentrate in volume of Concentrate Diluent shown below. Keep at RT (22-25°C).

Micro-plate Strips Used	2	4	6	8	10	12
HRP Conjugate Concentrate (µl)	16	32	48	64	80	96
Concentrate Diluent (ml)	2.0	4.0	6.0	8.0	10.0	12.0

## ASSAY PROCEDURE

Bring to RT (22-25°C)	Keep at 2-8°C
Plate/Sealers	Mouse IFN-Beta Standard
Dilution Buffer	Antibody Concentrate
Matrices/Samples	HRP Conjugate Concentrate
Concentrate Diluent	
TMB Substrate	
Stop Solution	

- **Incubations:** Use plate sealers to cover the plate when directed. All incubations should be conducted in a closed chamber at 22-25°C or at RT, keeping the plate away from drafts.
- **Plate Washing:** All wells should be filled with a minimum of 250 µl of Wash Solution. Remove plate contents by inverting and blotting the plate on lint-free absorbent paper; tap the plate dry.

1. Determine the number of microplate strips required. We recommend running both the standard and samples at least in duplicate. Remove extra microtiter strips from the frame, seal in the foil bag provided and store at 2-8°C. Unused strips can be used in later assays.

Add **100 µl** of **Standard, Sample or Blank** (Dilution Buffer or appropriate dilution matrix) to each designated well.

Cover with Plate Sealer and incubate at RT for 1 hour.

After 1 hour, empty plate contents and wash wells three times.

2. Add **100 µl** of diluted **Antibody Solution** to each well.

Cover with Plate Sealer and incubate at RT for 1 hour.

After 1 hour, empty plate contents and wash wells three times.

3. Add **100 µl** of **HRP Solution** to each well.

Cover with Plate Sealer and incubate at RT for 1 hour.

After 1 hour, empty plate contents and wash wells three times.

4. Add **100 µl** of **TMB Substrate Solution** to each well. Incubate **in the dark** at RT for 15 minutes. Do not use a Plate Sealer during the incubation.

5. After 15 minutes, **DO NOT EMPTY THE WELLS AND DO NOT WASH**. Add **100 µl** of **Stop Solution** to each well.

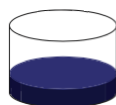
6. Using a microplate reader, determine the absorbance at 450 nm within 5 minutes after the addition of Stop Solution.

Visit PBL's website  
<https://pblsaysci.com/documentation> for additional  
 information including technical data sheet

## MOUSE IFN-BETA ELISA (42400) ASSAY PROCEDURE – QUICK REFERENCE

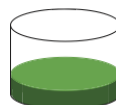
Total Time: 3 hr 15 min

**Note:** All incubations are at Room Temperature (RT) (22-25°C)\*



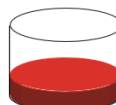
Add **100 µl** Standard, Sample, or Blank  
 Incubate **1 hr at RT\***

*Aspirate and Wash 3x*



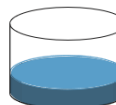
Add **100 µl** diluted Antibody Solution  
 Incubate **1 hr at RT\***

*Aspirate and Wash 3x*

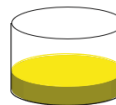


Add **100 µl** diluted HRP Solution  
 Incubate **1 hr at RT\***

*Aspirate and Wash 3x*



Add **100 µl** TMB Substrate  
 Incubate **15 min in the dark at RT\***  
*Do not seal, shake, or wash.*

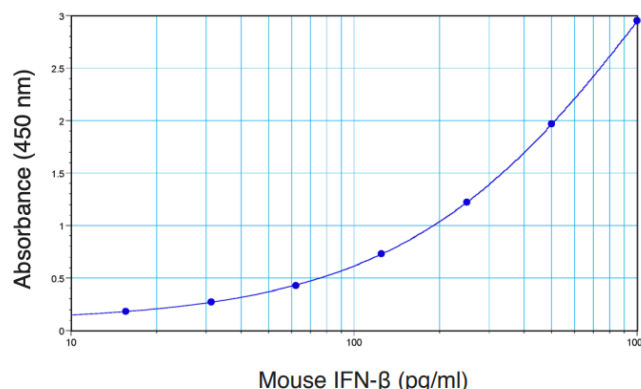


Add **100 µl** Stop Solution  
 Read plate within 5 min (450 nm)

## CALCULATION OF RESULTS

By plotting the optical densities (OD) using a 4-parameter fit for the standard curve, the interferon titer in the samples can be determined. Blank ODs may be subtracted from the standards and sample ODs to eliminate background.

**Figure 2: Typical Standard Curve**



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