



	<u>Reaction Mix</u>	<u>Standard Mix</u>
CD38 Assay Buffer	47.6 µl	50 µl
CD38 Substrate	2.4 µl	---

Mix well. Add 50 µl of Reaction Mix into the Positive Control and Sample(s) wells and 50 µl of Standard Mix into the Standard wells respectively.

5. Measurement: Measure the fluorescence (Ex/Em = 300/410 nm) in kinetic mode for 30-60 min at 37 °C.

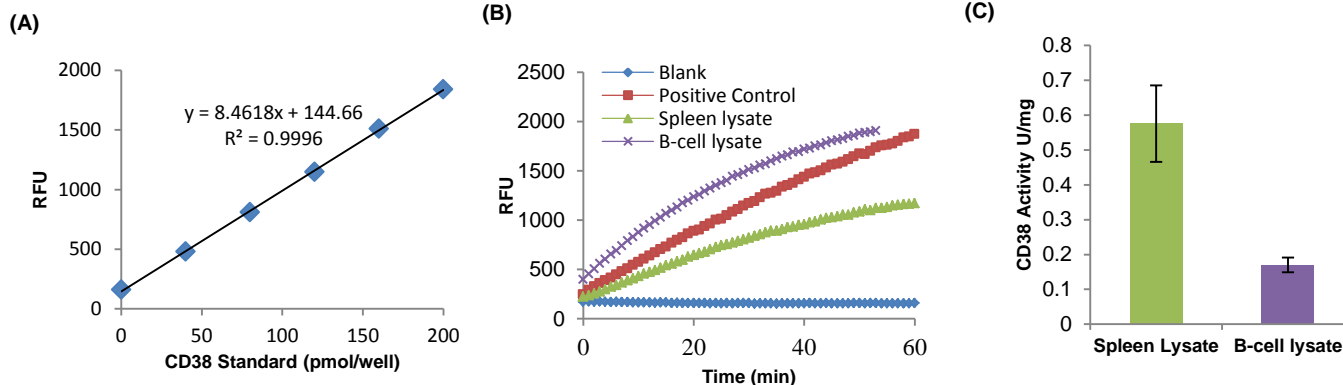
Note: Incubation time depends on the CD38 Activity in samples. We recommend measuring the fluorescence in a kinetic mode, and choosing any two time points (T₁ & T₂) in the linear range of the curve. The Standard Curve can be read in Endpoint mode (at the end of 30-60 min incubation).

6. Calculation: Subtract 0 Standard reading from all Standard readings. Plot the CD38 Standard Curve. Subtract Blank Control readings from the Sample(s) to get the corrected Sample reading. Apply the corrected Sample reading to the CD38 Standard Curve to get B nmol of product generated during the reaction time (ΔT = T₂ - T₁). To determine the activity of CD38 in the sample(s), use the following equation:

$$\text{Sample CD38 Activity} = \left\{ \frac{B}{\Delta T \times P} \right\} \times D F = \text{nmol/min/mg} = \text{U/mg}$$

Where,

- B** = Amount of product from the Standard Curve (nmol)
- ΔT** = Difference between T₂ and T₁ (min)
- P** = Amount of protein in the Sample (mg)
- DF** = Sample Dilution factor (D= 1 for undiluted samples)



Figures: (A) CD38 Standard Curve. (B) Reaction Kinetic curve of CD38 Positive Control, spleen lysate and B-cell lysate. (C) CD38 activity assayed in rat spleen lysate (2 µg) and B-cell lysate (2.7 µg). Assays were performed following the kit protocol.

VIII. Related Products:

- NAD/NADH Quantitation Colorimetric Kit (Cat# K337)
- PicoProbe™ NADH Fluorometric Assay Kit (Cat# K338)
- EZScreen™ NAD⁺/NADH Colorimetric Assay Kit (384-well) (Cat# K958)
- β-Nicotinamide adenine dinucleotide sodium salt (Cat# 9457)
- Human CellExp™ CD38, Mouse Recombinant (Cat# P1335)
- Human CellExp™ CD38, human recombinant (Cat# P1014)

FOR RESEARCH USE ONLY! Not to be used on humans.