

# Active Perforin 1 (PRF1) Instruction Manual

## SBPB221Mu02

### Mus musculus (Mouse)

#### Buffer Formulation

PBS, pH7.4, containing 0.01% SKL, 1mM DTT, 5% Trehalose and Proclin300.

#### Traits

Freeze-dried powder

#### Purity

> 90%

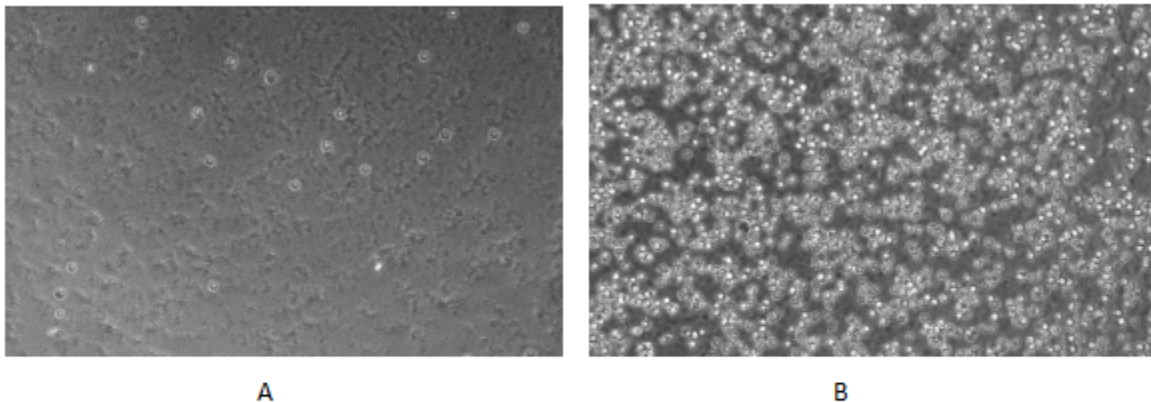
#### Isoelectric Point

8.3

#### Applications

Cell culture; Activity Assays.

### ACTIVITY TEST



**Figure 1. Hemolysis activity of recombinant mouse PRF1**

(A) 0.25% RaE treated with 5µg/ml PRF1 for 20h 40X;

(B) 0.25% RaE treated without PRF1 40X.

Perforin 1 (PRF1) is a pore forming cytolytic protein found in the granules of cytotoxic T lymphocytes (CTLs) and NK cells. Upon degranulation, perforin binds to the target cell's plasma membrane, and oligomerises in a Ca<sup>2+</sup> dependent manner to form pores on the target cell. The pore formed allows for the passive diffusion of a family of pro-apoptotic proteases, known as the granzymes, into the target cell. The activity of recombinant PRF1 was measured by lysis of erythrocytes using a hemolysis assay. A general procedure is as follows: two-fold dilute the recombinant mouse PRF1 with 0.9% NaCl, add 50µl a serial dilution of PRF1, 10µl 0.1M CaCl<sub>2</sub> to each well, then add 50µl 0.25% rabbit erythrocyte (RaE) to each well and mixed gently. Add 50µl 0.9% NaCl to replace PRF1 in control

wells. The plate is incubated for 20 hours at 37 °C, 5% CO<sub>2</sub>. The results are shown in Figure 1. It was obvious that the minimal effective concentration of PRF1 is 5µg/ml.

## **USAGE**

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

## **STORAGE**

Avoid repeated freeze/thaw cycles. Store at 2-8°C for one month. Aliquot and store at -80°C for 12 months.

## **STABILITY**

The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the protein at 37°C for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

## **Image**

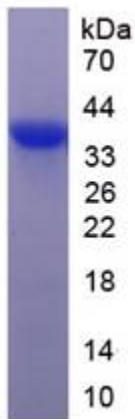


Figure. SDS-PAGE

## **[IMPORTANT NOTE]**

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.