Phytohaemagglutinin-M product information

PI-C3545 V1.0

Product Name

Name: Phytohaemagglutinin-M (PHA-M)

Cat. No.: C3545-0005

Size: 5 mL

Product Description

Phytohaemagglutinin is a lectin extracted from red kidney beans (*Phaseolus vulgaris*). The protein consists of two molecular species, leucoagglutinin (PHA-L) and erythroagglutinin (PHA-E). Each of the proteins contains a family of five isolectins, each being a tetramer held together by noncovalent forces. PHA-M is the mucoprotein form and is a crude extract used for the stimulation of cell proliferation in lymphocyte culture. PHA-M also has a powerful erythro-agglutinating property, and it was originally used for separating leukocytes from whole blood.

PHA-M is a sterile, frozen solution of an aqueous extract from selected red kidney beans.

Note

- For *in vitro* diagnostic use. PHA-M is not intended for therapeutic use.
- Use of VivaCell PHA-M does not guarantee the successful outcome of any diagnostic testing.
- Do not use PHA-M beyond the expiration date indicated on the product label.

Storage and Stability

The product should be kept at **-20°C**.
Shelf life: 12 months from date of manufacture

Procedure

1. Add 1 - 2 mL of PHA-M per 100 mL of karyotyping medium.
2. Inoculate approximately 0.5 mL of heparinized whole blood into a glass or plastic tube with 5 mL of medium (or 10^6 viable cells per mL).
3. Incubate the culture for 72 hours.
4. Add 0.1- 0.5 mL of Colcemid Solution to each culture tube. Incubate the culture for an additional 15-30 minutes.
5. Transfer the culture to a centrifuge tube and spin at 500 x *g* for 5 minutes.
6. Remove the supernatant and re-suspend the cells in 5 mL of hypotonic 0.075 M KCl solution. Incubate at 37ºC for 10 - 12 minutes.
7. Spin at 500 x *g* for 5 minutes.
8. Remove the supernatant, agitate the cellular sediment, and add drop-by-drop 5 – 10 mL fresh, ice-cold fixative made up of 1-part acetic acid to 3 parts methanol. Leave at 4ºC for 10 minutes.
9. Repeat steps 7 and 8.
10. Spin at 500 x *g* for 5 minutes.
11. Resuspend the cell pellet in 0.5 - 1 mL of fresh fixative, drop onto a clean slide, and allow to air dry.

12. At this stage, the preparation can be stained with Orcein or Giemsa.
13. Giemsa banding has become the most widely used technique. To obtain this G-banding staining is to treat slides with trypsin-EDTA 10X solution at 4 to 10°C for a few seconds.

Quality Control

PHA-M is tested for sterility. In addition, mitotic stimulation is evaluated using primary human peripheral blood lymphocytes.

Manufacturer

Shanghai Dr. Cell Co., Ltd.

Issue Date

June 2023

Precaution and Disclaimer

For research use only, not for clinical diagnosis, and treatment.