Plasmodium falciparum Welch

30950™

Description

Strain designation: Honduras-1/CDC
Deposited As: *Plasmodium falciparum* Welch
Type strain: No

Storage Conditions

Product format: Frozen

Intended Use

This product is intended for laboratory research use only. It is not intended for any animal or human therapeutic use, any human or animal consumption, or any diagnostic use.

BSL 2

ATCC determines the biosafety level of a material based on our risk assessment as guided by the current edition of *Biosafety in Microbiological and Biomedical Laboratories (BMBL)*, U.S. Department of Health and Human Services. It is your responsibility to understand the hazards associated with the material per your organization's policies and procedures as well as any other applicable regulations as enforced by your local or national agencies.

ATCC highly recommends that appropriate personal protective equipment is always

used when handling vials. For cultures that require storage in liquid nitrogen, it is important to note that some vials may leak when submersed in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vial exploding or blowing off its cap with dangerous force creating flying debris. Unless necessary, ATCC recommends that these cultures be stored in the vapor phase of liquid nitrogen rather than submersed in liquid nitrogen.

Certificate of Analysis

For batch-specific test results, refer to the applicable certificate of analysis that can be found at www.atcc.org.

Growth Conditions

Host:

In vitro culture in human erythrocyte

Medium:
ATCC Medium 2196: Malaria medium, complete
Temperature: 37°C

Handling Procedures

Culture maintenance:
Changing of the culture medium every 24 hours is required for a malaria-infected erythrocyte culture. Add washed, uninfected red blood cells (RBCs) to 1-3% haematocrit, and maintain parasitemia at 2-3% for continuous culture.

1. Remove flask with infected culture from 37ºC incubator and place onto flask warmer in biological safety hood.

2. Carefully aspirate the medium with a sterile unplugged Pasteur pipet attached to a vacuum line. Remove as much fluid as possible without taking the cells.

3. Aseptically add sterile warm (37ºC) completed medium to the flask (~8ml to a T-25, ~25ml to a T-75, etc.). Mix and smear as required to determine parasitemia (see below).

4. Add washed RBCs as necessary to obtain desired haematocrit and parasitemia.

5. Gently mix and aerate culture with gas mixture of 5% CO_2, 5% O_2 and 90% N_2 using a sterile, cotton plugged Pasteur pipet. Quickly tighten cap of the flask and place in 37ºC incubator until the next medium change.

Cryopreservation: Only young cells (rings) can be frozen in glycerolyte medium* because their membranes are more robust.

1. Centrifuge ring-stage culture for 5 mins. at 1000 x g in 50 ml centrifuge tube.

2. Aspirate supernatant using sterile Pasteur pipet.

3. Resuspend pellet gently in remaining supernatant.

4. Slowly add 5 volumes of glycerolyte medium to 3 volumes pellet dropwise via a syringe as follows:

A. Add the first volume of glycerolyte and allow the tube to stand for 5 mins. at room temperature.

B. Add the remaining 4 volumes of glycerolyte and gently agitate.

5. Aliquot mixture into Nunc screw-capped freezing vials and place in a Nalgene 1C cooling apparatus. Place the apparatus at -80°C overnight and then plunge ampules into liquid nitrogen. (The cooling rate in this apparatus is approximately -1°C/min.).

6. Plunge vials into liquid nitrogen (-196ºC) the next day and store in liquid nitrogen or liquid nitrogen vapor.

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: *Plasmodium falciparum* Welch (ATCC 30950)

References

References and other information relating to this material are available at www.atcc.org.

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