ATCC

Product Sheet

Plasmodium falciparum (ATCC® 50038™)

Please read this FIRST

Biosafety Level
2

Intended Use

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

Citation of Strain

If use of this culture results in a scientific publication, it should be cited in that manuscript in the following manner: *Plasmodium falciparum* (ATCC® 50038™)

American Type Culture Collection
PO Box 1549
Manassas, VA 20108 USA
www.atcc.org

800.638.6597 or 703.365.2700
Fax: 703.365.2750
Email: Tech@atcc.org

Or contact your local distributor

Description

Strain Designation: FCR-3/Gambia Clone D-4, Knobless
Deposited Name: *Plasmodium falciparum* Welch
Depositor: W Trager
Isolation:
derived from existing strain

Propagation

Growth Conditions
Temperature: 37.0°C
Growth condition: in vitro culture in human erythrocytes. Consult product sheet for protocol.

Medium
ATCC® Medium 2196: Malaria medium, complete

Instructions for Complete Medium
ATCC Medium 2196* w. type O blood

Protocols

Frozen ampules packed in dry ice should either be thawed immediately or stored in liquid nitrogen. If liquid nitrogen storage facilities are not available, frozen ampoules may be stored at or below -70°C for approximately one week. **Do not under any circumstance store frozen ampules at refrigerator freezer temperatures (generally -20°C).** Storage of frozen material at this temperature will result in the death of the culture.

The following directions for recovery from the frozen state must be carefully followed if a culture is to be successfully established.

1. Place the frozen vial in a 37ºC water bath until mixture is completely thawed.
2. Aseptically transfer the contents to a 50 ml sterile conical tube.
3. Slowly add 1 volume (0.1 ml) 12% Sodium Chloride solution dropwise via a 1ml syringe to 5 volumes sample (0.5 ml) and agitate continuously.
4. Allow the mixture to stand for 5 mins. at room temperature.
5. Slowly add 5 ml 1.8% Sodium Chloride dropwise via a larger syringe and allow to stand at room temperature for 2 mins.
6. Add 5 ml of 0.9% Sodium Chloride / 0.2% Glucose solution as in step 5.
7. Centrifuge for 5 min. at 1500rpm, remove supernatant.
8. Wash pellet in 20 ml incomplete medium.
9. Centrifuge for 5 min at 1500 rpm, remove supernatant.
10. Resuspend pellet in 8ml complete medium in tissue culture flask and gently aerate culture with gas mixture of 5% CO_2, 5% O_2 and 90% N_2 using a sterile, cotton plugged Pasteur pipet.
11. Smear if required (see below).

Cryopreservation

CRYOPRESERVATION:

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

1. Centrifuge ring stage culture for 5 min at 1800rpm 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 (see below) 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 screwtop freezing vials and store at 80ºC overnight.
6. Plunge vials into liquid nitrogen (-196ºC) the next day and store in liquid nitrogen or liquid nitrogen vapor.

**** To formulate glycerolyte medium, combine the following with distilled water to 100 ml: 57.00g glycerol, 1.60g sodium lactate ($C_3H_5NaO_3$), 30.00mg potassium chloride (KCl), 1.38g sodium dihydrogen phosphate (NaH_2PO_4). Mix well and adjust pH to 6.8 using concentrated NaOH and/or**

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HCl. Autoclave to sterilize, and store at 4ºC.

References

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

Biosafety Level: 2

Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the current publication of the *Biosafety in Microbiological and Biomedical Laboratories* from the U.S. Department of Health and Human Services Centers for Disease Control and Prevention and National Institutes for Health.

ATCC Warranty

The viability of ATCC® products is warranted for 30 days from the date of shipment, and is valid only if the product is stored and cultured according to the information included on this product information sheet. ATCC lists the media formulation that has been found to be effective for this strain. While other, unspecified media may also produce satisfactory results, a change in media or the absence of an additive from the ATCC recommended media may affect recovery, growth and/or function of this strain. If an alternative medium formulation is used, the ATCC warranty for viability is no longer valid.

Disclaimers

This product is intended for laboratory research purposes only. It is not intended for use in humans.

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Please see the enclosed Material Transfer Agreement (MTA) for further details regarding the use of this product. The MTA is also available on our Web site at www.atcc.org

Additional information on this culture is available on the ATCC web site at www.atcc.org.

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