ATCC

Product Sheet

Ustilago maydis (ATCC® MYA-4924™)

Please read this FIRST

Storage Temp.
Frozen: -80°C or colder
Freeze-Dried: 2°C to 8°C
Live Culture: See Propagation Section

Biosafety Level
1

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: *Ustilago maydis* (ATCC® MYA-4924™)

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: FGSC 9021 [UM521, DSMZ 14603]
Deposited Name: *Ustilago maydis*
Product Description: An ampoule containing viable cells (yeast cells, spores, or agar cubes with mycelia) suspended in cryoprotectant.

Propagation

The information recommended in this section is to assist users in obtaining living culture(s) for their studies. The recommendation does not imply that the conditions or procedures provided below are optimum. Experienced researchers may initiate the growth of a culture in their own way.

ATCC® Medium 200: YM agar or YM broth
ATCC® Medium 28: Emmons' modification of Sabouraud's agar
ATCC® Medium 336: Potato dextrose agar (PDA)

Growth Conditions
Temperature: 20°C to 25°C
Atmosphere: Typical aerobic

Recommended Procedure
Frozen ampoules 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 ampoules at refrigerator freezer temperatures (generally -20°C).** Storage of frozen material at this temperature will result in the death of the culture.

1. To thaw a frozen ampoule, place in a **25°C to 30°C** water bath, until just thawed (**approximately 5 minutes**). Immerse the ampoule just sufficient to cover the frozen material. Do not agitate the ampoule.
2. Immediately after thawing, wipe down ampoule with 70% ethanol and aseptically transfer 50 µL (or any amount desired up to all) of the content onto a plate or broth with medium recommended.
3. Incubate the inoculum/strain at the temperature and conditions recommended.
4. Inspect for growth of the inoculum/strain regularly. The sign of viability is noticeable typically after 2-3 days of incubation. However, the time necessary for significant growth will vary from strain to strain.

Colony and Cell Morphology: Colonies on YM agar at 25°C after 5 days are dimorphic with center flat, finely pruinose, locally smooth and shiny. Later zonate toward margins, radially fibrillar with outermost margin fringed. Yeast cells are fusiform variable in size and have polar budding.

Notes

Mating type a1b1
Additional, updated information on this product may be available on the ATCC web site at www.atcc.org.

DNA Sequence

18S ribosomal RNA gene, partial sequence; internal transcribed spacer 1, 5.8S ribosomal RNA gene, and internal transcribed spacer 2, complete sequence; and 28S ribosomal RNA gene, partial sequence
TTTTTTTTCTGAGGTGTGGCTCGCACCTGTCCAACTAAACCTGAGCTACCTTTTTTATATAACACGGTTGC
ATCGGTCGGTCTGTCGAAACCAGTAGCGCTCATAGCGAGCAGCGTCTGGGGAAAGACGGGTCGGCGC
TTCTTACCAACACTTTTGAACACTAGGATTGGAAGGACAAAAATCATTTTTTTGATGATGGAAGCGACT
GGTAATGCGGTCGTCTAAATTGAAAAAACAACTTTTGGCAACGGATCTCTTGGTTCTCCCATCGATGAA
GAACGCAGCGAATTGCGATAAGTAATGTGAATTGCAGAAGTGAATCATCGAATCTTTGAACGCACCTT
GCGCTCCCGGCAGATTTAATCTGGGGAGCATGCCTGTTTGAGGGCCGCGAATTGTTTCGAACGACAGC
TTTTTTTTCTTGTTGAGAAAGAGCTGGCGGATCGGTAGTGAGGGTCTCTGCCATTTACCGTGGCTCCCTC
GAAATGCATTAGCGCATCCATTGGAAGGCGGAAAGACGGACGAAAGCTCGAGTTTTTTTGCCCTCGCT
TCCCTGCCGGGTTTTGATAATGTCAGGACTTCGGAGGCGAAGAGAGGGCGGGAGCTGGACGCAACGA
CTTTTCTGCTGTTTGGCGTGCTTCTGAACCCCGCCCATGCCTCTGCTTTAACCACAGAGG

D1D2 region of the 28S ribosomal RNA gene
CATATCAATAAGCGGAGGAAAAGAAACTAACAAGGATTCCCCTAGTAACGGCGAGTGAAGAGGGAA
GAGCCCAAGATTGAAAGCTGGCGTCTTCGGCGTCCGCATTGTAATCTCAAGAAGTGTTTTCCGCTTCGG
ACCATGCCTAAGTCCCTTGGAAAAGGGCATCATAGAGGGTGATAATCCCGTACATGGCATGGAGCGC

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CCGTAGCTTTGTGATACGCTTTCTAAGAGTCGAGTTGTTTGGGAATGCAGCTCAAAATGGGTGGTAAAT
GCCATCTAAGGCTAAATATTGGGGAGAGACCGATAGCGAACAAGTACAGTGATGGAAAGATGAAAA
GAACTTTGAAAAGAGAGTTAAACAGTACGTGAAATTGCCAAAAGGGAAGGGTAGGAGGTCAGAGAT
GCGTCTTGGGATTCAGCCTTGCTTTTGCCTGGTGTTTTTCCCAAGCTGCAGGCCAACGTCGGTTTTGGGC
ACTGGAGAAGGGTAGGAGGAACGTGGCACCTCTCGGGGTGTGTTATAGCCTCCTACTGGATACAGCG
ACCGAGACCGAGGAACGCAGCGTACTCGTAAGAGCGGGCCTTTTGGCACCTTTACGCTTAGGGCGTTG
GCATAATGGCCCTCTACCAC

Isolation

Zea mays, United Kingdom.

References

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

Biosafety Level: 1

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.

While ATCC uses reasonable efforts to include accurate and up-to-date information on this product sheet, ATCC makes no warranties or representations as to its accuracy. Citations from scientific literature and patents are provided for informational purposes only. ATCC does not warrant that such information has been confirmed to be accurate.

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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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