



Borrelia burgdorferi **Johnson et al. emend.** **Baranton et al.**

35210™

Description

Borrelia burgdorferi strain B31 is a whole-genome sequenced type strain that was isolated from a tick (*Ixodes dammini*). This bacterial culture has applications in infectious disease research, vector-borne disease research, and zoonotic disease research.

Strain designation: B31

Deposited As: *Borrelia burgdorferi* Johnson et al. emend. Baranton et al.

Type strain: Yes

Patent depository: This material was deposited with the ATCC Patent Depository to fulfill U.S. or international patent requirements. This material may not have been produced or characterized by ATCC. As an International Depository Authority (IDA) for patent deposits, ATCC is required to complete viability testing only at time of initial deposit of patent material. Patent deposits are made available on behalf of the Depositor when the pertinent U.S. or international patent is issued, but material may not be used to infringe the patent claims.

Technical information: ATCC Product Experience does not have technical information on patent deposits that are not produced or characterized by ATCC. Additional information can be found in the corresponding patent available from the patent holder or with the U.S. and/or international patent office.

Storage Conditions

Product format: Frozen

Storage conditions: -80°C or colder

Intended Use

35210

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

Medium:

ATCC Medium 1914: Revised BSK medium

ATCC Medium 260: Trypticase soy agar/broth with defibrinated sheep blood

Temperature: 37°C

Atmosphere: Microaerophilic

Handling Procedures

1. Open thawed vial according to enclosed instructions or visit www.atcc.org for instructions.
 2. Aseptically transfer the entire contents to a 5-6 mL tube of #1914 broth. Additional test tubes can be inoculated by transferring 0.5 mL of the primary broth tube to these secondary broth tubes.
 3. Use several drops of the primary broth tube to inoculate a #260 plate and/or agar slant.
 4. Or, to obtain a biphasic culture, add several drops of the primary broth tube to a agar slant. Best practice is to incubate these slants at an angle.
 5. Incubate at 37°C under microaerophilic conditions for 3-4 days. Use an anaerobe jar with an active catalyst and a microaerophilic gas generator pack or other acceptable method. All tubes and slants should be incubated with caps loosened.
-

Notes

Broth growth is non-turbid and is best observed via a wet mount. Organism does not grow well on agar.

Growth usually occurs after 4-5 days. Acid formation during growth will change the medium to a light or yellowish-orange color. Turbidity is not evident. Cells can be monitored under phase microscopy as long spiral rods, and their motility by the twitching movement.

Borrelia burgdorferi is a fragile, sensitive organism that must have the appropriate medium for growth. Rabbit serum is essential for the growth of this organism. Fresh medium enhances growth. Medium older than one month should not be used.

35210

Purified genomic DNA of this strain is available as ATCC 35210D-5 and ATCC 35210DQ.

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

Material Citation

If use of this material results in a scientific publication, please cite the material in the following manner: *Borrelia burgdorferi* Johnson et al. emend. Baranton et al. (ATCC 35210)

References

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

Warranty

The product is provided 'AS IS' and the viability of ATCC® products is warranted for 30 days from the date of shipment, provided that the customer has stored and handled the product according to the information included on the product information sheet, website, and Certificate of Analysis. For living cultures, ATCC lists the media formulation and reagents that have been found to be effective for the product. While other unspecified media and reagents may also produce satisfactory results, a change in the ATCC and/or depositor-recommended protocols may affect the recovery, growth, and/or function of the product. If an alternative medium formulation or reagent is used, the ATCC warranty for viability is no longer valid. Except as expressly set forth herein, no other warranties of any kind are provided, express or implied, including, but not limited to, any implied warranties of merchantability, fitness for a particular purpose, manufacture according to cGMP standards, typicality, safety, accuracy, and/or noninfringement.

Disclaimers

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. Any proposed commercial use is prohibited without a [license from ATCC](#).

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 or complete and the customer bears the sole responsibility of confirming the accuracy and completeness of any such information.

This product is sent on the condition that the customer is responsible for and assumes all risk and responsibility in connection with the receipt, handling, storage, disposal, and use of the ATCC product including without limitation taking all appropriate safety and handling precautions to minimize health or environmental risk. As a condition of receiving the material, the customer agrees that any activity undertaken with the ATCC product and any progeny or modifications will be conducted in compliance with all applicable laws, regulations, and guidelines. This product is provided 'AS IS' with no representations or warranties whatsoever except as expressly set forth herein and in no event shall ATCC, its parents, subsidiaries, directors, officers, agents, employees, assigns, successors, and affiliates be liable for indirect, special, incidental, or consequential damages of any kind in connection with or arising out of the customer's use of the product. While reasonable effort is made to ensure authenticity and reliability of materials on deposit, ATCC is not liable for damages arising from the misidentification or misrepresentation of such materials.

Please see the material transfer agreement (MTA) for further details regarding the use of this product. The MTA is available at www.atcc.org.

This material is cited in a US and/or international patent and may not be used to infringe the claims. Depending on the wishes of the Depositor, ATCC may be required to inform the Depositor of the party to which the material was furnished.

Copyright and Trademark Information

© ATCC 2023. All rights reserved.

ATCC is a registered trademark of the American Type Culture Collection.

Revision

This information on this document was last updated on 2025-04-12

Contact Information

ATCC

10801 University Boulevard

Manassas, VA 20110-2209

USA

US telephone: 800-638-6597

Worldwide telephone: +1-703-365-2700

Email: tech@atcc.org or contact your local distributor
