Product Information Sheet for NR-33708

Streptococcus pyogenes, Strain MGAS1882

Catalog No. NR-33708

For research use only. Not for use in humans.

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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Streptococcaceae, Streptococcus*
Species: *Streptococcus pyogenes*
Strain: MGAS1882
Serotype: M59
Original Source: *Streptococcus pyogenes* (*S. pyogenes*), strain MGAS1882 is a historic strain isolated in the 1970s from a human case of post-streptococcal glomerulonephritis in the United States.[1]
Comments: *S. pyogenes*, strain MGAS1882 has been molecularly characterized as a serotype M59, Group A *Streptococcus* (GAS) strain that is susceptible to penicillin.[1,2] The complete genome of *S. pyogenes*, strain MGAS1882 has been sequenced (GenBank: CP003121).[2]

S. pyogenes is a non-motile, non-sporulating, Gram-positive, β-hemolytic coccus found in normal human nasopharyngeal flora and is one of the most frequent pathogens of humans. It is estimated that between 5-15% of normal individuals harbor *S. pyogenes* without signs of disease. Mild infections may present as pharyngitis (strep throat), scarlet fever (rash), impetigo (superficial skin) or cellulitis (deep skin). Invasive, toxigenic infections can result in necrotizing fasciitis, myositis and streptococcal toxic shock syndrome.[3]

Recently emerged, genetically distinct M59 GAS strains are responsible for an ongoing epidemic of severe skin and soft tissue infections across Canada.[2]

Material Provided:
Each vial contains approximately 0.5 mL of bacterial culture in Tryptic Soy broth supplemented with 10% glycerol.

Note: If homogeneity is required for your intended use, please purify prior to initiating work.

Packaging/Storage:
NR-33708 was packaged aseptically in cryovials. The product is provided frozen and should be stored at -60°C or colder immediately upon arrival. For long-term storage, the vapor phase of a liquid nitrogen freezer is recommended. Freeze-thaw cycles should be avoided.

Growth Conditions:
Media:
Tryptic Soy broth or Todd-Hewitt broth or equivalent
Tryptic Soy agar or Tryptic Soy agar with 5% sheep blood or Todd-Hewitt agar or equivalent
Incubation:
Temperature: 37°C
Atmosphere: Aerobic, ambient
Propagation:
1. Keep vial frozen until ready for use, then thaw.
2. Transfer the entire thawed aliquot into a single tube of broth.
3. Use several drops of the suspension to inoculate an agar slant and/or plate.
4. Incubate the tube, slant and/or plate at 37°C for 1 day.

Note: *Streptococcus* species are generally fast growers. To avoid overgrowth of the culture, incubation without shaking is recommended for growth in broth.

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Streptococcus pyogenes*, Strain MGAS1882, NR-33708."

Biosafety Level: 2
Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health. Biosafety in Microbiological and Biomedical Laboratories (BMBL). 6th ed. Washington, DC: U.S. Government Printing Office, 2020.

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References:

1. Musser, J. M., Personal Communication.
2. Fittipaldi, N., et al. "Full-Genome Dissection of an Epidemic of Severe Invasive Disease Caused by a Hypervirulent, Recently Emerged Clone of Group A *Streptococcus*." Am. J. Pathol. 180 (2012): 1522-1534. PubMed: 22330677.
3. Olsen, R. J. and J. M. Musser. "Molecular Pathogenesis of Necrotizing Fasciitis." Annu. Rev Pathol. 5 (2010): 1-31. PubMed: 19737105.

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