Leptospira interrogans, Strain M1352, LPS Mutant (Serovar Manilae)

Catalog No. NR-19820

For research use only. Not for human use.

Contributor:
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Manufacturer:
BEI Resources

Product Description:
Bacteria Classification: *Leptospiraceae, Leptospira*
Species: *Leptospira interrogans*
Serovar: Manilae
Strain: M1352
Original Source: *Leptospira interrogans* (*L. interrogans*), strain M1352 (serovar Manilae) is a transposon mutant of wild-type strain L495 created by disruption of a gene of unknown function, *Lman_1408*, located downstream of a putative sugar pyridoxal-phosphate-dependent aminotransferase and 208 base pairs upstream of a putative *rmlC* (dTDP-4-dehydrorhamnose 3,5-epimerase), within the lipopolysaccharide (LPS) biosynthesis locus of strain L495.[1,2]
Comments: *L. interrogans*, strain M1352 (serovar Manilae) has an altered expression of LPS and is highly attenuated in a hamster model of infection.[1,2] The whole genome shotgun sequence of *L. interrogans*, strain M1352 (serovar Manilae) is available (GenBank: AHPV00000000).

L. interrogans is a thin, motile, slow-growing obligate aerobe spirochete with distinctive hooked ends and two axial flagella that causes the acute zoonotic-disease leptospirosis.[3,4] Rats are the reservoir hosts of pathogenic *L. interrogans* serovars and shed leptospires from their kidneys where the bacteria colonize in renal tubules.[4] Humans are incidentally-infected by direct contact with their urine or indirectly through contaminated water or soil in areas of heavy rainfall in urban areas with poor sanitation and flood control infrastructure in developing countries.[3-6] Leptospirosis is an emerging global disease due to exposure through tourism in highly-endemic areas.[3]

L. interrogans virulence is not fully understood, however interactions between surface protein virulence factors (including lipopolysaccharide, flagella, heme oxygenase, adhesion molecules, and outer membrane proteins) and extra-cellular matrix components of host tissues have been demonstrated.[3,4] Serovar Manilae has been shown to be resistant to complement-mediated killing[9] and is known to express the virulence-determinant surface-exposed lipoprotein, *Lig*A (leptospiral immunoglobulin-like protein A).[5,8,9]

Material Provided:
Each vial contains approximately 0.5 mL of bacterial culture in Ellinghausen-McCullough-Johnson-Harrison (EMJH) Medium supplemented with 2.5% DMSO.

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

Packaging/Storage:
NR-19820 was packaged aseptically, in screw-capped plastic 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:
EMJH Semisolid Agar (0.15%) (ATCC medium 2653) or equivalent
Incubation:
Temperature: 30°C
Atmosphere: Aerobic
Propagation:
1. Keep vial frozen until ready for use; thaw slowly.
2. Transfer the entire thawed aliquot into a single tube or jar of semisolid agar.
4. Incubate the tube or jar at 30°C for 10 to 18 days until an opaque disk of growth is visible several millimeters below the surface of the medium (Dinger's disk).

Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH: *Leptospira interrogans*, Strain M1352, LPS Mutant (Serovar Manilae), NR-19820."

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. 5th ed. Washington, DC: U.S. Government Printing Office, 2009; see www.cdc.gov/biosafety/publications/bmbl5/index.htm.

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