# *Streptococcus pneumoniae,* Strain TCH8431

## Catalog No. HM-145

## For research use only. Not for use in humans.

### Contributor:
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### Manufacturer:
BEI Resources

### Product Description:
Bacteria Classification: *Streptococcaceae, Streptococcus*
Species: *Streptococcus pneumoniae*
Strain: TCH8431
Serotype: 19A
Original Source: *Streptococcus pneumoniae (S. pneumoniae),* strain TCH8431 was isolated from a human respiratory tract.[1]
Comments: *S. pneumoniae*, strain TCH8431 (HMP ID 0837) is a reference genome for The Human Microbiome Project (HMP). HMP is an initiative to identify and characterize human microbial flora. The complete genome of *S. pneumoniae*, strain TCH8431 was sequenced at the Human Genome Sequencing Center at Baylor College of Medicine (GenBank: CP001993).
Note: HMP material is taxonomically classified by the depositor. Quality control of these materials is only performed to demonstrate that the material distributed by BEI Resources is identical to the deposited material.

*S. pneumoniae* is a Gram-positive, α-hemolytic, diplococcal, aerotolerant anaerobe that is a major cause of pneumonia, bacterial meningitis, and otitis media. *S. pneumoniae* has a polysaccharide capsule that acts as a virulence factor for the organism. There are over ninety different capsular types of *S. pneumoniae* which differ in virulence, prevalence, and extent of drug resistance.[2,3]

### Material Provided:
Each vial contains approximately 0.5 mL of bacterial culture in Brain Heart Infusion broth supplemented with 10% glycerol.

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

### Packaging/Storage:
HM-145 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:
Brain Heart Infusion broth or Tryptic Soy broth or equivalent
Brain Heart Infusion agar or Tryptic Soy agar with 5% defibrinated sheep blood or equivalent
Incubation:
Temperature: 37°C
Atmosphere: Aerobic with 5% $CO_2$
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.

### Citation:
Acknowledgment for publications should read "The following reagent was obtained through BEI Resources, NIAID, NIH as part of the Human Microbiome Project: *Streptococcus pneumoniae*, Strain TCH8431, HM-145."

### 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. HMP 0837 (*Streptococcus pneumoniae*, strain TCH8431)
2. Mitchell, A. M. and T. J. Mitchell. "*Streptococcus pneumoniae*: Virulence Factors and Variation." Clin. Microbiol. Infect. 16 (2010): 411-418. PubMed: 20132250.
3. Jedrzejas, M. J. "Pneumococcal Virulence Factors: Structure and Function." Microbiol. Mol. Biol. Rev. 65 (2001): 187-207. PubMed: 11381099.
4. Habib, M., B. D. Porter and C. Satzke. "Capsular Serotyping of *Streptococcus pneumoniae* Using the Quellung Reaction." J. Vis. Exp. 24 (2014): e51208. PubMed: 24637727.

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