

Tail fiber belongs to



Summary of Content

A tail fiber is either a protein appendage on a bacteriophage used for host recognition or a fiber optic cable segment used for connectivity in optical networks.

Biological Tail Fibers

In virology, tail fibers are protein structures located at the distal end of a bacteriophage's tail, extending from the baseplate. They play a critical role in recognizing and binding to specific receptors on bacterial host cells, which is the first step in viral infection. Tail fibers vary in length and number; for example, the T4 bacteriophage has six long fibers (~145 nm) and six short fibers (~40 nm), each composed of multiple proteins such as gp34, gp35, gp36, and gp37. The distal tip, or receptor-binding domain, is responsible for host specificity. Tail fiber assembly often requires chaperone proteins, and their genes evolve rapidly due to selective pressure, allowing phages to adapt to different bacterial hosts. The binding process, called adsorption, is initially reversible and triggers a signal to the phage baseplate once the correct receptor is engaged.

Fiber Optic Tail Fibers



Article Content

Tailocin tail fiber diversity correlates with rfbD variation in the

Tail fibers Strains in PSSC are thought to carry and produce a single tailocin, with each tailocin equipped with one of three distinct tail

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Tail fiber Definition for Microbiology | Fiveable

Tail fibers are protein structures that extend from the baseplate of a bacteriophage and play a crucial role in recognizing and binding

Tail Fiber: Types, Functions, and Common Interfaces

Similar to fiber optic jumpers, tail fibers are classified into single-mode and multimode types, differing in color,

Amino acid residues in the tail fiber differentiate the host ...

Accurate recognition and attachment to the bacterial host, mediated by tail fibers, are crucial for successful phage

Fiber tail fiber characteristics

The bundled pigtail has only one end with a connector, and the other end is a broken end of

Ares_viral_fibers_AAM

Viral fibers play a central role in many virus infection mechanisms since they recognize the corresponding host and establish a

What are tail fibers?

The tail fibers play a key role in determining the host specificity and the process of phage infection. The wide array of phage tail fibers

Fiber tail fiber

They are made up of thin strands of glass or plastic fibers that are used to transmit light signals. The light signals are

RBPseg : Science Advances

Tail fibers, a major class of RBPs, are elongated and flexible trimeric proteins, making their full-length structures difficult

Functional domains of Acinetobacter bacteriophage tail fibers

often found in the tail fibers of select *A. baumannii* phages. To further explore the functional domains associated with

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RBPseg: Toward a complete phage tail fiber structure atlas

For instance, phage T4 has two tail fiber sets: a short tail fiber (STF) formed by gp12, responsible for pseudo-irreversible binding to a

Major tail proteins of bacteriophages of the order Caudovirales

Tailed bacteriophages with a double-stranded DNA genome, which comprise the order of Caudovirales, account for

Understanding Bacteriophage Tail Fiber

The exact mechanisms of how the tail fiber interacts with the receptor at the molecular/atomic level are critical for engineering

Phage tail fibre assembly proteins employ a modular structure to drive ...

The crystal structure of a complex between the tail fibre and tail fibre assembly (Tfa) protein of *Escherichia coli* phage

(PDF) Towards a complete phage tail fiber structure atlas

The partial phage tail fiber atlas. a) Network connecting the TC with phage family or 482 subfamily. Node size is

Viral tail fiber protein ~ ViralZone

Tail fibers are responsible for the specific, albeit reversible primary attachment to host cell.

RBPseg: Toward a complete phage tail fiber structure atlas

RBPseg enables accurate modeling of tail fiber structure, providing the first comprehensive

RBPseg: Toward a complete phage tail fiber structure atlas

Tail fibers, a major class of RBPs, are elongated and flexible trimeric proteins, making their full-length structures

Towards a complete phage tail fiber structure atlas

18 Tail fibers, a prominent type of RBP, are typically elongated, flexible, and trimeric proteins, 19 making it challenging to obtain high

Tail Fiber: Types, Functions, and Common Interfaces

A tail fiber, also known as a fiber optic patch cord, consists of a connector on one end and a cut end of the fiber optic

Bacteriophage T4 long tail fiber domains

Bacteriophage T4 initially recognizes its host cells using its long tail fibers. Long tail fibers consist of a phage-proximal

Targeting mechanisms of tailed bacteriophages

Many phages use tails to attach to and penetrate the cell envelope of their bacterial hosts. In this Review, Brouns and

Viral tail fiber protein ~ ViralZone

A variable number of fibers are attached to the distal part of the tail of caudovirales bacterial viruses. Tail fibers are responsible for

Architecture of the bacteriophage lambda tail: Structure

The central tail fiber is exclusively composed of trimeric C-terminal BHP gpJ proteins. Bacteriophage lambda has a

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