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ProductInformation

M13mp18 PHAGE DNA, SINGLE STRANDED (+ STRAND)

Product Number **D 8410**
Storage Temperature –20 °C

TECHNICAL BULLETIN

Product Description

M13 is a single stranded DNA bacteriophage that infects *E. coli* strains. A chronic infection is set up during which the intracellular replicative form of the phage (RI, double stranded DNA) serves as a template for single stranded DNA([+] strand DNA) production. The single stranded DNA, packaged in phage coat proteins is extruded through the host cell wall into the medium in large quantities.

M13mp8 and M13mp9 are M13 derivatives that contain a multiple cloning site within a portion of the gene for β-galactosidase. This DNA segment corrects a defect in β-galactosidase production by the host strain. Foreign DNA incorporated at the multiple cloning site results in loss of β-galactosidase production and consequently the inability to use lactose as a carbon source. Such lactose negative strains are detected as "white plaques" on media containing X-Gal, 5-Bromo-4-chloro-3-indolyl β-D-galactopyranoside, a chromogenic substrate for β-galactosidase (Product No. B 9146).

This vector is isolated from the host strain *Escherichia coli,* strain JM 101.

Unique sites within the β-galactosidase gene are Bgl I, Mst II, Pvu I. See also map of multiple cloning site.

Other unique sites include Aha II, ApaL I, Ava II, Bal I, Ban II, Bgl II, Bsm I, Dra III, HgiD I, Nae I, Nar I, Sau3A I, Sin I, SnaB I, Sno I.

Note: attempts to clone foreign DNA at these "other sites" will likely lead to inactivation of essential phage functions.

Reagents

M13mp8 Phage DNA is supplied in solution in 10 mM Tris-HCl, pH 8.0, containing 1 mM EDTA.

Precautions and Disclaimer

This product is for R&D use only. Please consult the MSDS for information regarding hazards and safe handling practices.

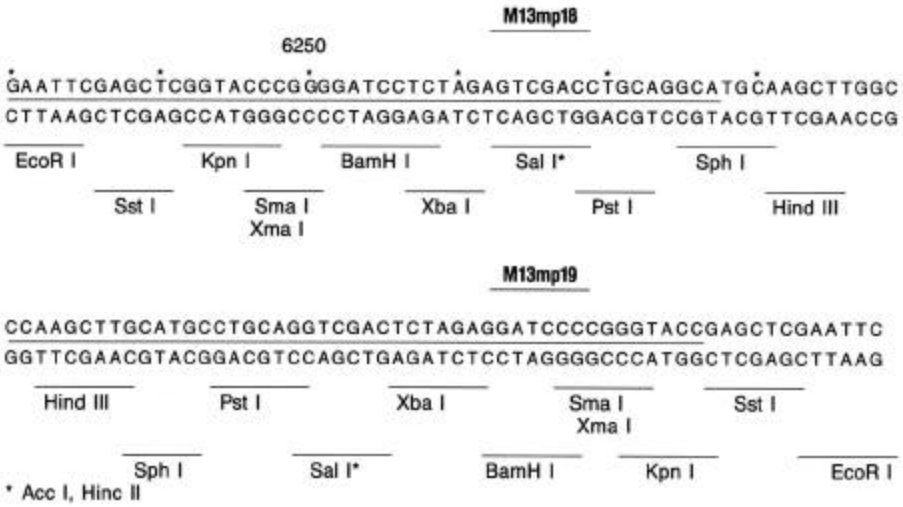
Storage/Stability

Store at –20 °C.

References

1. Yanisch-Perron, C., et al., Improved M13 phage cloning vectors and host strains: nucleotide sequences of the M13mp18 and pUC19 vectors. Gene, **33,** 103-19 (1985).
2. Ebright, R., et al., Corrected nucleotide sequence of M13mp18 gene III. Gene, **114,** 81-3 (1992).

Multiple Cloning Site



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