Mouse Anti-M13 Monoclonal Antibody, HRP

Cat. No. CAB-655M **Lot. No.** (See product label)

SPECIFICATION

Product Overview	
Species	M13
Source	Mouse
Immunogen Description	M13 is a filamentous bacteriophage composed of circular single stranded DNA (ssDNA) which is 6407 nucleotides long encapsulated in approximately 2700 copies of the major coat protein P8, and capped with 5 copies of two different minor coat proteins (P9, P6, P3) on the ends. Infection with filamentous phages is not lethal, however the infection causes turbid plaques in E. coli. It is a non-lytic virus. However a decrease in the rate of cell growth is seen in the infected cells. M13 plasmids are used for many recombinant DNA processes, and the virus has also been studied for its uses in nanostructures and nanotechnology. The phage coat is primarily assembled from a 50 amino acid protein called pVIII (or p8), which is encoded by gene VIII (or g8) in the phage genome. For a wild type M13 particle, it takes about approximately 2700 copies of p8 to make the coat about 900 nm long. The coat"s dimensions are flexible though and the number of p8 copies adjusts to accommodate the size of the single stranded genome it packages. The general stages to a viral life cycle are: infection, replication of the viral genome, assembly of new viral particles and then release of the progeny particles from the host. Filamentous phage use a bacterial structure known as the F pilus to infect E. coli, with the M13 p3 tip contacting the TolA protein on the bacterial pilus. The phage genome is then transferred to the cytoplasm of the bacterial cell where resident proteins convert the single stranded DNA genome to a double stranded replicative form.

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Immunogen	M13 phage
Antibody Type	HRP conjugated Mouse Monoclonal Antibody
Ig Type	Mouse IgG1
Formulation	0.2 μm filtered solution in PBS with 50% Glycerol
Preparation	This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with M13 phage. The IgG fraction of the cell culture supernatant was purified by Protein A affinity chromatography and then conjugated with Horseradish-peroxidase (HRP).
Specificity	M13 phage, this antibody can be used to detect M13 phage which express antibodies or not. It is tested by ELISA to verify detection of 1E8 - 1E9 pfu / ml of M13 phage
Western Blot	This antibody can be used at 0.05 - 0.1 μg/mL in WB
Direct ELISA	This antibody can be used at 0.05 - 0.1 μg/mL in ELISA
Storage	This antibody can be stored at 2°C-8°C for one month without detectable loss of activity. Antibody products are stable for twelve months from date of receipt when stored at -20℃ to -70℃. Preservative-Free. Sodium azide is recommended to avoid contamination (final concentration 0.05%-0.1%). It is toxic to cells and should be disposed of properly. Avoid repeated freeze-thaw cycles.

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