

# HRP Conjugated Anti-M13 Antibody [A5B3]

## EM1902-18



<b>Product Type:</b>	Mouse monoclonal IgG1, primary antibodies
<b>Species reactivity:</b>	M13 phage
<b>Applications:</b>	ELISA
<b>Clone number:</b>	A5B3

**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.

<b>Conjugate:</b>	HRP-conjugated
<b>Immunogen:</b>	Synthetic peptide within bacteriophage M13 aa 1-50 / 73.
<b>Positive control:</b>	M13 Phage
<b>Database links:</b>	SwissProt: P69541 BacteriophageM13
<b>Recommended Dilutions:</b>	
<b>ELISA</b>	1:5,000-1:20,000
<b>Storage Buffer:</b>	PBS (pH7.4), 0.1% BSA, 40% Glycerol.
<b>Storage Instruction:</b>	Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.
<b>Purity:</b>	Immunogen affinity purified.

Hangzhou Huan Biotechnology Co., Ltd.

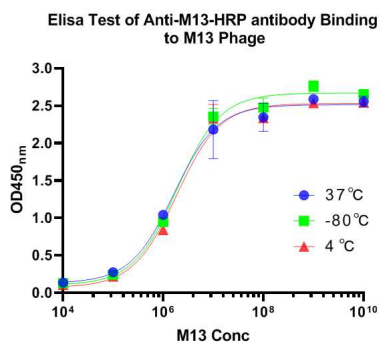
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## Images



**Fig1:** Elisa Test of M13 antibody (HRP) Binding to M13 Phage. Samples were blocked with 1% BSA for 1 hour at 37°C and incubated with the primary antibody (EM1902-18, 1/10000) for 1 hour at 25°C. The M13 antibody was repeatedly frozen and thawed for 4 times at -80°C, 4°C, 37°C.

**Note:** All products are “FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE”.

## Background References

1. Khalil, A.S. et al., Single M13 Bacteriophage Tethering and Stretching. Proc Natl Acad Sci. USA. 104 (12): 4892-7.
2. Sitohy, M. et al., Inhibition of Bacteriophage m13 Replication With Esterified Milk Proteins. J Agric Food Chem. 54 (11): 3800-6.

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