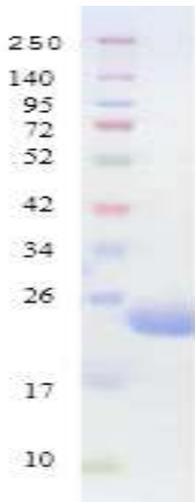


Product Data Sheet

□ Cat# TMV15-R-100 Recombinant E.coli Tobacco Mosaic virus Coat Protein (full length, >95% Pure, His-tag) Size: 100 ug

Tobacco mosaic virus (TMV) was the first virus to be discovered over a century ago and the first virus to be purified. TMV is a positive single-sense RNA virus (+ssRNA) belonging to the tobamovirus genus. It is capable of infecting hundreds of different plants and ornamental flowers. TMV infectious symptoms include; stunting, mosaic pattern of light and dark green or yellow on the leaves, malformation of leaves, yellow streaking of leaves, yellow spotting on leaves, distinct yellowing of only veins and in some crops such as grapes and apples it can be symptomless. TMV is a very thermostable virus and can withstand temperatures up to 50°C for 30 minutes. TMV can multiply only inside a living cell but it can survive in a dormant state in dead tissue and retain its ability to infect plants for years after the infected plant has died. After infection TMV enters neighboring cells through the plasmodesmata. Infection spreads by direct contact to neighboring cells. TMV also produces a 30kDa movement protein called P30 which it uses to move from cell to cell. It can also spread through phloem for longer distance movement within the plant. TMV can also be transmitted from one plant to another or by human handling (mechanical transmission). There is currently no cure for a TMV infected plant. If a plant is infected then care should be taken to remove all weeds since they may harbor TMV, remove all crop debris from benches and greenhouse structures, discard infected plants, disinfect tools by placing them in a disinfectant, disinfect door handles, greenhouse structures, and tools that may have become contaminated

Source and Forms of Protein



Tobacco Mosaic virus Coat protein (Uniprot: P03574) was expressed in E. coli. It contains a c-terminal His-tag. The Coat protein corresponds to the full-length protein. It migrates as a band of approximately 23 kDa in reducing/denaturing conditions. Purified Coat Protein is supplied in a buffer containing PBS pH 7.4 +8M Urea and a preservative.

Recommended Usages: This protein is suitable for uses such as an ELISA coating antigen or standard, use as an immunogen, or as a Western Blot positive control.

Western Blotting: Load ~100-200 ng/lane for good visibility with appropriate antibodies.

ELISA: Assay dependent concentration

Protein homology: Tobacco Mosaic virus Coat protein (strain 06) is highly conserved across various TMV strains (<95%). Shows 98% homology with Pepper mild mottle virus capsid, 95% Rehmannia mosaic virus capsid, 94% Ribgrass mosaic virus capsid, 88% Tomato brown rugose fruit virus capsid, 83% Tomato mosaic virus capsid, 83% Tomato mottle mosaic virus capsid, 83% Tobacco mild green mosaic virus capsid, 78% Bell pepper mottle virus, 74% Tropical soda apple mosaic virus capsid, 70% Tobacco mild green mosaic virus capsid, and 72% Odontoglossum ringspot virus capsid.

This product is for in vitro research use only.

Related Material available for ADI

Catalog#	Description
TMVMP11-A	Rabbit anti-Tobacco Mosaic Virus (TMV) Movement Protein IgG, affinity pure
TMVMP11-P	Control/Blocking peptide for Tobacco Mosaic Virus Movement Protein
TMV15-R-100	Recombinant E.coli Tobacco Mosaic virus Coat Protein
TMV11-A	Rabbit anti-Tobacco Mosaic virus Coat Protein IgG, affinity pure
TMV-RDT-010	TruStrip RDT Tobacco Mosaic virus (cassette), 25 tests/box
TMV-005-096	Tobacco Mosaic virus Coat protein ELISA Kit, 96 tests, Quantitative

Storage

Short-term: unopened, undiluted vials for less than a week at 4°C.

Long-term: at -20°C or below in suitable aliquots after reconstitution. Can be frozen, but avoid multiple freeze/thaw cycles

Stability: 6-12 months at -20°C or below.

TMV15-R-100 180111IA