Mumps and epidemic parotitis is a viral disease of the human species, caused by the mumps virus. Painful swelling of the salivary glands (classically the parotid gland) is the most typical presentation. Painful testicular swelling (orchitis) and rash may also occur. The symptoms are generally not severe in children. The disease is generally self-limited, running its course before receding, with no specific treatment apart from controlling the symptoms with pain medication. Mumps is a contagious disease that is spread from person to person through contact with respiratory secretions such as saliva from an infected person. Mumps can also be spread by sharing food and drinks. A person infected with mumps is contagious from approximately 6 days before the onset of symptoms until about 9 days after symptoms start.

A physical examination confirms the presence of the swollen glands. Usually the disease is diagnosed on clinical grounds and no confirmatory laboratory testing is needed. If there is uncertainty about the diagnosis, a test of saliva, or blood may be carried out; a newer diagnostic confirmation, using real-time nested polymerase chain reaction (PCR) technology, has also been developed. An estimated 20%-30% of cases are asymptomatic. As with any inflammation of the salivary glands, serum amylase is elevated.

Before the development of vaccination and the introduction of a vaccine, it was a common childhood disease worldwide. The most common preventative measure against mumps is immunization with a mumps vaccine. The vaccine may be given separately or as part of the MMR immunization vaccine which also protects against measles and rubella. The efficacy of the vaccine depends on the strain of the vaccine, but is usually around 80%. The Jeryl Lynn strain is most commonly used in developed countries but has been shown to have reduced efficacy in epidemic situations. The Leningrad-Zagreb strain commonly used in developing countries appears to have superior efficacy in epidemic situations.

Vaccine efficacy can be measured by the number of reported cases in the USA. For measles, 894,134 cases reported in 1941 compared to 288 cases reported in 1995 resulted in a 99.97% decrease in reported cases; for mumps, 152,209 cases reported in 1968 compared to 840 cases reported in 1995 resulted in a 99.45% decrease in reported cases; and for rubella, 57,686 cases reported in 1969 compared to 200 cases reported in 1995 resulted in a 99.65% decrease.

MMR II vaccine (Merck) is a live virus vaccine for vaccination against measles (rubeola), mumps, and rubella (German measles). MUMPSVAX® (Mumps Virus Vaccine Live), the Jeryl Lynn™ (B level) strain of mumps virus propagated in chick embryo cell culture, appears to have superior efficacy in epidemic situations.

Further, the Jeryl Lynn strain of the vaccine is reported to have superior efficacy to other strains in epidemic situations. Before the development of vaccination and the introduction of a vaccine, it was a common childhood disease worldwide. The most common preventative measure against mumps is immunization with a mumps vaccine. The vaccine may be given separately or as part of the MMR immunization vaccine which also protects against measles and rubella. The efficacy of the vaccine depends on the strain of the vaccine, but is usually around 80%. The Jeryl Lynn strain is most commonly used in developed countries but has been shown to have reduced efficacy in epidemic situations. The Leningrad-Zagreb strain commonly used in developing countries appears to have superior efficacy in epidemic situations.

Source of Antigen and Antibodies

Mumps virus (Enders strain) was grown in BSC-1 cells. Optimally infected cells are harvested, disrupted by sonication in culture medium and the subject to low speed centrifugation. The supernatant form the infected culture is concentrated using crossflow filtration. Mumps antigen inactivated using gamma radiation. The resulting preparation contains high concentration of virus and viral components as well as some cellular material suspended in 196B buffer. This is also referred to as grade 2 antigen. It contains 0.09% azide as a preservative.

Final preparation contains no infectious material. However, all precautions should be taken to avoid contamination.

Storage

Short-term: unopened, undiluted liquid vials at -20°C and powder at 4°C or -20°C.

Long-term: at –20°C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

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

Recommended Usage

The antigen should be sonicated for 5-10 seconds immediately prior to use to ensure uniformity of solution. The antigen is suitable as antigen in a variety of ELISA, Western and other immunoassays.

ELISA

Latex agglutination/Neutralization

Optimal dilution must be tested by the user under specified conditions (range 1:100-1:1,000 depending upon the sensitivity of the assay).


*This product is for in vitro research use only.

Recommended Usage

Cat. #: ProdDescription
MUMS11-S: Anti-Mumps virus (Enders) Virus antiserum
MUMS12-M: Monoclonal Anti-Mumps viruses (Enders) Virus IgG
520-100-HMG: Human Anti-Mumps Virus (parotitis) IgG ELISA
520-110-HMM: Human Anti-Mumps Virus (parotitis) IgM ELISA
520-120-HMA: Human Anti-Mumps Virus (parotitis) IgA ELISA
520-130-MMG: Mouse Anti-Mumps Virus (parotitis) IgG ELISA
520-140-MMG: Mouse Anti-Mumps Virus (parotitis) IgM ELISA
520-150-MMG: Mouse Anti-Mumps Virus (parotitis) IgA ELISA

Source of Antigen and Antibodies

Mumps virus (Enders strain) was grown in BSC-1 cells. Optimally infected cells are harvested, disrupted by sonication in culture medium and the subject to low speed centrifugation. The supernatant form the infected culture is concentrated using crossflow filtration. Mumps antigen inactivated using gamma radiation. The resulting preparation contains high concentration of virus and viral components as well as some cellular material suspended in 196B buffer. This is also referred to as grade 2 antigen. It contains 0.09% azide as a preservative.

Recommended Usage

Cat. #: ProdDescription
MUMS15-N-500: Mumps-Antigen

150513A

Recommended Usage

Cat. #: ProdDescription
MUMS11-S: Anti-Mumps virus (Enders) Virus antiserum
MUMS12-M: Monoclonal Anti-Mumps viruses (Enders) Virus IgG
520-100-HMG: Human Anti-Mumps Virus (parotitis) IgG ELISA
520-110-HMM: Human Anti-Mumps Virus (parotitis) IgM ELISA
520-120-HMA: Human Anti-Mumps Virus (parotitis) IgA ELISA
520-130-MMG: Mouse Anti-Mumps Virus (parotitis) IgG ELISA
520-140-MMG: Mouse Anti-Mumps Virus (parotitis) IgM ELISA
520-150-MMG: Mouse Anti-Mumps Virus (parotitis) IgA ELISA

Source of Antigen and Antibodies

Mumps virus (Enders strain) was grown in BSC-1 cells. Optimally infected cells are harvested, disrupted by sonication in culture medium and the subject to low speed centrifugation. The supernatant form the infected culture is concentrated using crossflow filtration. Mumps antigen inactivated using gamma radiation. The resulting preparation contains high concentration of virus and viral components as well as some cellular material suspended in 196B buffer. This is also referred to as grade 2 antigen. It contains 0.09% azide as a preservative.