



Poultry industry is major industry generating \$100s of billions worldwide. Poultry farming is the raising of domesticated birds such as chickens, turkeys, ducks, and geese, for the purpose of farming meat or eggs for food. Therefore, it is very important that the animals are raised in a clean and hygienic environment. Like humans or other animals, chickens suffer from various bacterial and viral diseases requiring treatment with antibiotics and vaccines. There are four main types of disease affecting poultry: metabolic and nutritional diseases; infectious diseases; parasitic diseases; and behavioral diseases. Infectious diseases are often contagious, which means they can be spread directly or indirectly from one living thing to another. These include Avian Encephalomyelitis, Avian Influenza (AIV), Avian Tuberculosis, Chicken Anaemia Virus Infection (or CAV), Chlamydiosis, Egg Drop Syndrome (or EDS), Fowl Cholera (or Pasteurellosis), Fowl Pox, Infectious Bronchitis, Infectious Bursal Disease (or Gumboro), Infectious Coryza, Infectious Laryngotracheitis, Lymphoid Leukosis, Marek's Disease (MDV), Mycoplasmosis, Necrotic Enteritis, Newcastle Disease (NDV), Salmonellosis. **Vaccination** plays an important part in the health management of the poultry flock. The purpose in using a vaccine to prevent a particular disease is to trigger or boost the bird's immune system to produce antibodies that in turn fight the invading causal organisms. Some of the most common ones are infection with **E. coli** (O157:H7" strain) and Salmonella.



Avian influenza (AI) is a highly contagious viral infection which may cause up to 100% mortality in domestic chickens or turkeys. The disease is caused by a virus belonging to the family Orthomyxoviridae. Influenza viruses have two surface proteins, **haemagglutinin (HA)** and **neuraminidase (N)**, that determine their subtype and the animal species they infect. When AI viruses of two haemagglutinin types, H5 and H7, infect domestic poultry (chickens or turkeys) they often mutate and virulent disease arises in these birds which is called highly pathogenic avian influenza (HPAI). The initial infection that does not cause or causes minimal disease is called

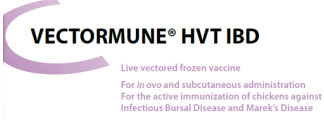
low pathogenic avian influenza (LPAI). **OPTIMUNE® AIV vaccine** and **CEVAC FLU-KEM** contains the low pathogenic Avian Influenza virus Type A, Subtype H5N2, that is chemically inactivated and suspended in an oil emulsion.



Chicken anaemia virus (CAV) infection is an acute viral infection of chickens that is found worldwide. CAV can infect chickens of all ages but disease is only seen in young chickens and is characterized by depression, anorexia, anaemia, haemorrhage and a sudden rise in mortality. CAV is a small DNA virus. Vaccination of antibody-negative breeder flocks prior to the start of egg production is recommended. **Nobilis CAV P4** is a live attenuated vaccine against Chicken. **Anaemia Virus. CIRCUMUNE® W** is a live chicken Infectious Anemia Virus vaccine, Del Ros strain, for administration in the drinking water.



Infectious bronchitis (IBV) is a highly contagious viral respiratory infection of chickens, however the virus will also infect the urogenital and gastrointestinal tracts. Infectious bronchitis is caused by a coronavirus. Numerous vaccines are available commercially. The vaccine used should contain specific virus known to be present in the area. All vaccines contain live virus and those that give the best protection unfortunately can also produce symptoms of the disease. **MAXIMUNE® 8** and **CEVAC® ND IB IBD EDS K** contains in inactivated form of the virus in oil adjuvant.



Marek's disease virus (MDV) is a highly contagious viral infection that predominantly affects chickens. The disease is one of the most common diseases affecting poultry flocks worldwide. Mortality rates can be very high in susceptible birds. MD is caused by a highly cell-associated (virus particles that remain attached to or within the host cell after replication) but readily transmitted herpesvirus. There are three serotypes of MD virus. Virulent (disease causing) chicken isolates fall into serotype 1. Avirulent (not disease causing) chicken isolates fall into serotype 2. Serotype 3 designates the related avirulent virus that is commonly found in turkeys.

VECTORMUNE® HVT IBD & SB1 is a live Marek Disease vaccine containing a genetically engineered Marek Disease virus of serotype 3 (turkey Herpesvirus or HVT) expressing key protective Infectious Bursal Disease antigens and a serotype 2 (SB-1) Marek Disease virus.



Newcastle disease is a highly contagious viral infection that affects many species of domestic and wild birds. The disease can result in digestive, respiratory and/or nervous signs. Newcastle disease is caused by a paramyxovirus that can vary in pathogenicity from mild to highly pathogenic. Live Newcastle virus (**NDV**) vaccine and **CEVAC® NEW K** contain B1 Type, LaSota Strain virus in inactivated form with an oil adjuvant.

ADI has developed antibody ELISA kits for chicken viruses to determine the efficacy of existing vaccines and test new vaccines. **The antibody titer can be determined in serum or directly in egg yolks** using special antibody diluents that stabilizes and extracts the antibodies from egg yolks.

Items Description	Species	Antibody Type IgG Cat#	Antibody Type IgM Cat#
Avian Influenza A virus (AIV) vaccine Antibody ELISA	Chicken	920-100-AIV	920-105-AIM
Chicken Anemia Virus (AV) vaccine antibody ELISA	Chicken	920-110-AV	
Chicken Infectious Bronchitis Virus (IBV) vaccine antibody ELISA	Chicken	920-120-IBV	
Avian Marek's disease virus (MDV) vaccine antibody ELISA	Chicken	920-130-MDV	
Chicken Newcastle Disease Virus (NDV) vaccine antibody ELISA	Chicken	920-140-NDV	
Chicken Avian Influenza virus (H5N1) vaccine antibody ELISA	Chicken	920-300-H51	