Canine Distemper-Adenovirus Type 2-Parainfluenza Vaccine
Modified Live Virus
For use in dogs only

PRODUCT DESCRIPTION:
Vanguard DAP is for vaccination of healthy dogs as an aid in preventing canine distemper caused by canine distemper (CD) virus, infectious canine hepatitis (ICH) caused by canine adenovirus type 1 (CAV-1), respiratory disease caused by canine adenovirus type 2 (CAV-2), and canine parainfluenza virus (CPI) propagates on an established canine cell line and freeze-dried to preserve stability.

SAFETY AND EFFICACY:
Safety and efficacy of Vanguard DAP was confirmed in laboratory and field tests. In more than 15,000 vaccinated dogs, no significant postvaccination reactions attributable to the vaccine were reported. These findings are particularly important since adverse side effects sometimes follow vaccination with

REFERENCES:
5. Study 2194-69-31-004, Pfizer Animal Health
Technical inquiries should be directed to Pfizer Animal Health Technical Services, (800) 366-5288 (USA), (800) 461-0917 (Canada).
For veterinary use only
U.S. Patent No. 3,616,203
U.S. Veterinary License No. 189
Pfizer Animal Health
Exton, PA 19341, USA
NY, NY 10017

PRECAUTIONS:
1. Store at 2°–7°C. Prolonged exposure to higher temperatures and/or direct sunlight may adversely affect potency. Do not freeze.
2. Use entire contents when first opened.
3. Sterile syringes and needles should be used to administer this vaccine. Do not mix with other drugs because traces of disinfectant may inactive the vaccine.
4. Use only in dogs; not for cats or other species.
5. Contains gentamicin as preservative.
6. Vaccination of pregnant bitches should be avoided.
7. As with many vaccines, anaphylaxis may occur after use. Initial antidote of epinephrine is recommended and should be followed with appropriate supportive therapy.
8. This product has been shown to be efficacious in healthy animals. A protective immune response may not be elicited if animals are recieving an infectious disease, are malnourished or parasitized, are stressed due to shipment or environmental conditions, are otherwise severely compromised, or the vaccine is not administered in accordance with label directions.
In companion animals, immunological response to infection or vaccination has generally been evaluated by measuring the level of antibodies in serum and correlating these with protection or susceptibility. For the diseases caused by canine distemper virus, canine parvovirus, canine adenovirus and leptospirosis, evaluation of antibody titers may be a valuable diagnostic indicator to determine when revaccination may be needed. For diseases caused by viral agents, it is paramount in making the best recommendation for a vaccination protocol for a specific animal.

The duration and character of the immune response to the viral antigens of Vanguard and/or Vanguard Plus were determined in a multi-center serology study involving 47 small animal practitioners. In dogs vaccinated and boosted as puppies, and then vaccinated again approximately 1 year later, revaccination with Vanguard DAP has been demonstrated to result in serum antibody titers that persist for 12–48 months against CD virus (serum neutralization [SN] titer ≥ 1:32), CAV-1 (SN ≥ 1:16), CAV-2 (SN ≥ 1:16) and CPI virus (SN ≥ 1:16).

Protection against infectious agents involves a complex interplay between humoral immunity, cellular immunity, or a combination of both. The purpose of vaccination is to induce effector cells in both these arms of the immune system. During the process, long-term immunity is in the form of memory T and B lymphocytes is produced. Memory cells and antibodies interact to provide protection to an animal challenged with the same pathogens at a later date. Depending on the vaccine and the disease, antibodies may be produced that provide complete protection from disease and prevent or reduce shedding. In other cases, antibodies may play a minor or ineffective role and protection from disease relies on systemic, local cellular immunity and/or local antibody production. The role of sustained serological titers in the prevention of disease has not been confirmed.

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The duration and character of the immune response to the viral antigens of Vanguard and/or Vanguard Plus were determined in a multi-center serology study involving 47 small animal practitioners. In dogs vaccinated and boosted as puppies, and then vaccinated again approximately 1 year later, revaccination with Vanguard DAP has been demonstrated to result in serum antibody titers that persist for 12–48 months against CD virus (serum neutralization [SN] titer ≥ 1:32), CAV-1 (SN ≥ 1:16), CAV-2 (SN ≥ 1:16) and CPI virus (SN ≥ 1:16).

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The duration and character of the immune response to the viral antigens of Vanguard and/or Vanguard Plus were determined in a multi-center serology study involving 47 small animal practitioners. In dogs vaccinated and boosted as puppies, and then vaccinated again approximately 1 year later, revaccination with Vanguard DAP has been demonstrated to result in serum antibody titers that persist for 12–48 months against CD virus (serum neutralization [SN] titer ≥ 1:32), CAV-1 (SN ≥ 1:16), CAV-2 (SN ≥ 1:16) and CPI virus (SN ≥ 1:16).

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The duration and character of the immune response to the viral antigens of Vanguard and/or Vanguard Plus were determined in a multi-center serology study involving 47 small animal veterinary practices in different states to determine the duration of immunity induced by the vaccines against canine distemper virus (CDV), canine parvovirus (CPV), canine adenovirus 1 (CAV-1) and canine adenovirus 2 (CAV-2). Protection against infectious agents involves a complex interplay between humoral immunity, cellular immunity, or a combination of both. The purpose of vaccination is to induce effector cells in both these arms of the immune system. During the process, long-term immunity in the form of memory T and B lymphocytes is produced. Memory cells and antibodies interact to provide protection to an animal challenged with the same pathogen at a later date. Depending on the vaccine and the disease, antibodies may be produced that provide complete protection from disease and prevent shedding. In other cases, antibodies may play a minor or ineffective role and protection from disease relies on systemic, local cellular immunity and/or local antibody production. The role of sustained serological titers in the prevention of disease has not been confirmed.

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The duration and character of the immune response to the viral antigens of Vanguard and/or Vanguard Plus were determined in a multicenter serology study involving 47 small animal practices. Vaccination with ICH vaccine, persistent kidney infections may occur, causing virus shedding in urine. Uveitis and corneal opacity also are occasionally observed 1-2 weeks after vaccination. Dogs vaccinated with Vanguard DAP, however, did not recover from vaccinated dogs, and were not isolated from tissues taken at necropsy. Occasional lesions were not observed in any of 132 dogs inoculated intranasally with multiple doses of CDV-2 vaccine virus, while intranasal inoculation of 22 dogs with ICH vaccine produced occult lesions in 27%. Additionally, the strain of CDV-2 in this product has been shown free of oncogenic properties characteristic of canine adenoviruses.

Efficacy of Vanguard DAP was demonstrated in challenge-immunity studies. Dogs vaccinated with the CDV-2 vaccine were completely protected against challenge with virulent CDV virus that produced clinical disease in 100% of nonvaccinated control dogs. Vaccines were also protected against challenge with virulent CAV-2 that caused severe respiratory adenovirus in susceptible controls. After challenge with virulent CD virus, 95% of dogs vaccinated with the CD vaccine remained healthy. In contrast, all nonvaccinated control dogs developed clinical signs of CD, and 80% died. After challenge with virulent CDV virus, no clinical signs of disease were observed among dogs vaccinated with CPI vaccine, while all nonvaccinated controls revealed clinical signs of meningitis and severe lung lesions typical of CPI.

**DURATION OF SEROLOGIC RESPONSE:**

In dogs vaccinated and boosted as puppies, and then vaccinated again approximately 1 year later, revaccination with Vanguard DAP has been demonstrated (under field conditions) to result in serum antibody titers that persist for 12-48 months against CD virus (hemagglutinin inhibition [HI] titer ≥ 1:128, CAV-1 [SN ≥ 1:16]), CAV-2 (SN ≥ 1:16) and CPI virus (SN ≥ 1:16).

Protection against infectious agents involves a complex interaction between humoral immunity, cellular immunity, or a combination of both. The purpose of vaccination is to induce effector cells in both these arms of the immune system. During the process, long-term immunity in the form of memory T and B lymphocytes is produced. Memory cells and antibodies interact to provide protection to an animal challenged with the same pathogen at a later date. Depending on the vaccine and the disease, antibodies may be produced that provide complete protection from disease or prevent shedding. In other cases, antibodies may play a minor or negligible role and protection from disease relies on systemic, local cellular immunity and/or local antibody production. The role of sustained serological titers in the prevention of disease has not been confirmed.

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Table 1. Geometric mean titers/number of dogs

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<tr>
<td>CPV</td>
<td>601/119</td>
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<td>462/21</td>
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The duration and character of the immune response to the viral antigens of Vanguard and/or Vanguard Plus were determined in a multi-center serology study involving 47 small animal dogs. Dogs must have received at least a priming vaccination series approximately 2–7 weeks apart as a puppy and a modified live ICH vaccine. After vaccination with ICH vaccine, persistent kidney infections may occur, causing virus shedding in urine. Uveitis and corneal opacity also are occasionally observed 1–2 months after vaccination. Vaccination with the CAV-2 fraction in Vanguard DAP, however, produces no lesions. Challenge virus was not recovered from vaccinated dogs, and was not isolated from tissues taken at necropy. Occasional lesions were not observed in any of 172 dogs inoculated intravenously with multiple doses of CAV-2 virus, while intravenous inoculation of 12 dogs with ICH vaccine produced ocular lesions in 27%. Additionally, the strain of CAV-2 in this product has been shown free of oncogenic properties characteristic of canine adenoviruses.

Efficacy of Vanguard DAP was demonstrated in challenge–immunity studies. Dogs vaccinated with the CAV-2 vaccine were completely protected against challenge with virulent ICH virus that produced clinical disease in 100% of nonvaccinated control dogs. Vaccines were also protected against challenge with virulent CAV-2 that caused severe respiratory syndromes in susceptible controls. After challenge with virulent ICH virus, 85% of dogs vaccinated with the CAV-2 vaccine remained healthy. In contrast, all nonvaccinated control dogs developed clinical signs of CD, and 85% died. After challenge with virulent CPI virus, no clinical signs of disease were observed among dogs vaccinated with CPI vaccine, while all nonvaccinated controls developed clinical signs of CPI.

**Duration of Serologic Response:**

In dogs vaccinated and boosted as puppies, and then vaccinated again approximately 1 year later, revaccination with Vanguard DAP has been demonstrated (under field conditions) to result in serum antibody titers that persist for 12–46 months against CD virus (hemagglutination inhibition [HI] titer ≥ 1:128), CAV-1 (HI ≥ 1:16), CAV-2 (HI ≥ 1:16) and CPI virus (SN ≥ 1:16).

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Canine Distemper
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Parainfluenza Vaccine
Modified Live Virus
For use in dogs only

PRODUCT DESCRIPTION:
Vanguard DAP is for vaccination of healthy dogs as an aid in preventing canine distemper caused by canine distemper (CD) virus, infectious canine hepatitis (ICH) caused by canine adenovirus type 1 (CAV-1), respiratory disease caused by canine adenovirus type 2 (CAV-2), and canine parainfluenza (PI) caused by canine parainfluenza virus (CPIV) propagated on an established canine cell line and freeze-dried to preserve stability.

SAFETY AND EFFICACY:
Safety of Vanguard DAP was confirmed in laboratory and field tests. In more than 15,000 vaccinated dogs, no significant pre-vaccination reactions attributable to the vaccine were reported. These findings are particularly important since adverse side effects sometimes follow vaccination with

REFERENCES:
5. Study 2194-68-01-004, Pfizer Animal Health

TECHNICAL INQUIRIES SHOULD BE DIRECTED TO PfiZER ANIMAL HEALTH TECHNICAL SERVICES, (800) 366-5288 (USA), (800) 461-0917 (Canada).

FOR VETERINARY USE ONLY
U.S. PATENT NO. 3,616,203
U.S. VETERINARY LICENSE NO. 189

11AUG05

75-0651-00
Canine Distemper-Adenovirus Type 2-Parainfluenza Vaccine
Modified Live Virus
For use in dogs only
Canine Distemper-Adenovirus Type 2-Parainfluenza Vaccine
Modified Live Virus

PRODUCT DESCRIPTION:
Vanguard DAP is for vaccination of healthy dogs as an aid in preventing canine distemper caused by canine distemper (CD) virus, infectious canine hepatitis (ICH) caused by canine adenovirus type 1 (CAV-1), respiratory diseases caused by canine adenovirus type 2 (CAV-2), and canine parainfluenza virus (CPI) virus propagated on an established canine cell line and freeze-dried to preserve stability.

SAFETY AND EFFICACY:
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PRECAUTIONS:
1. Store at 2°–7°C. Prolonged exposure to higher temperatures and/or direct sunlight may adversely affect potency. Do not freeze.
2. Use entire contents within 1 month from date of opening.
3. Sterile syringes and needles should be used to administer the vaccine. Do not sterilize with chemicals because traces of disinfectant may inactivate the vaccine.
4. Fecal contamination and all unused contents.
5. Contains gentamicin as preservative.
6. Vaccination of pregnant bitches should be avoided.
7. This product has been shown to be efficacious in healthy animals. A protective immune response may not be achieved if animals are re-infected with an infectious disease, are malnourished, or parasitized, are stressed due to shipment, or environmental conditions, or are otherwise immunocompromised, or the vaccine is not administered in accordance with label directions.

REFERENCES:
5. Study 21941-68-01-004, Pfizer Animal Health
7. Technical inquiries should be directed to Pfizer Animal Health Technical Services, (800) 366-5288 (USA), (888) 461-0917 (Canada).
8. Pfizer Animal Health

For veterinary use only
U.S. Patent No. 5,018,263
U.S. Veterinary License No. 189
Canine Distemper-Adenovirus Type 2-Parainfluenza Vaccine
Modified Live Virus
For use in dogs only

PRODUCT DESCRIPTION:
Vanguard DAP is for vaccination of healthy dogs as an aid in preventing canine distemper caused by canine distemper (CD) virus, infectious canine hepatitis (ICH) caused by canine adenovirus type 1 (CAV-1) virus, respiratory disease caused by canine adenovirus type 2 (CAV-2) virus, and parainfluenza virus (PPI) caused by canine parainfluenza virus (CPI) virus propagated on an established canine cell line and freeze-dried to preserve stability.

SAFETY AND EFFICACY:
Safety of Vanguard DAP was confirmed in laboratory and field tests. In more than 15,000 vaccinated dogs, no significant postvaccination reactions attributable to the vaccine were reported. These findings are particularly important since adverse side effects sometimes follow vaccination with