For the use of a Registered Medical Practitioner Only

Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine Adsorbed

ADACEL®
Intramuscular injection
Suspension for injection

1. GENERIC NAME

Tetanus Toxoid, Reduced Diphtheria Toxoid and Acellular Pertussis Vaccine Adsorbed

2. QUALITATIVE & QUANTITATIVE COMPOSITION

Each 0.5mL contains:
Tetanus Toxoid Adsorbed .....5 Lf
Diphtheria Toxoid Adsorbed .....2 Lf
Pertussis Toxoid Adsorbed (PT) .....2.5 micrograms (µg)
Filamentous Haemagglutinin Adsorbed (FHA) .... 5.0 micrograms (µg)
Pertactin Adsorbed (PRN) ..... 3.0 micrograms (µg)
Fimbriae Types 2 and 3 Adsorbed (FIM) ..... 5.0 micrograms (µg)
Aluminium Phosphate (Adjuvant) .....1.5 milligram (mg)
2-Phenoxyethanol ..... 0.6 %v/v
Formaldehyde ..... 5.0000 micrograms (µg)
Glutaraldehyde-Trace Amounts
Water for Injection .....q.s. 0.5 ml

3. DOSAGE FORM AND STRENGTH

0.5ml Suspension for injection

4. CLINICAL PARTICULARS

4.1 THERAPEUTIC INDICATIONS

ADACEL® is indicated for active booster immunization for the prevention of tetanus, diphtheria and pertussis (whooping cough) as a single dose in persons aged 11 to 54 years.
Persons who have had tetanus, diphtheria or pertussis should still be immunized since these clinical infections do not always confer immunity. Human Immunodeficiency Virus (HIV)-infected persons, both asymptomatic and symptomatic, should be immunized against tetanus, diphtheria and pertussis according to standard schedules.

ADACEL® is not to be used for the treatment of disease caused by *B. pertussis, C. diphtheriae or C. tetani infections*.

Other Populations:

ADACEL® is not indicated for immunization of children below the age of 11 years and in persons above the age of 54 years.

Tetanus Prophylaxis in Wound Management

The need for active immunization with a tetanus toxoid-containing preparation such as Td Adsorbed vaccine or ADACEL®, with or without passive immunization with Tetanus Immune Globulin, depends on both the condition of the wound and the patient's vaccination history (See POSOLOGY & METHOD OF ADMINISTRATION).

4.2 POSOLOGY & METHOD OF ADMINISTRATION

Dosing Considerations

Administration Route Related Precautions:
Do not administer ADACEL® by intravascular injection: ensure that the needle does not penetrate a blood vessel.

Intradermal or subcutaneous routes of administration are not to be utilized.

ADACEL® should not be administered into the buttocks.

Recommended Dose and Dosage Adjustment

ADACEL® (0.5 mL) should be administered as a booster injection by the intramuscular route.
Re-dosing with ADACEL® can be used to boost immunity to diphtheria, tetanus and pertussis at 5- to10-year intervals.

The preferred site is into the deltoid muscle.
Fractional doses (doses <0.5 mL) should not be given. The effect of fractional doses on the safety and efficacy has not been determined.

ADACEL® may be administered to pregnant women during the second or third trimester to provide passive protection of infants against pertussis (see Special Populations & Pharmacodynamics)

Health-care professionals should also refer to the NACI recommendations for tetanus prophylaxis in routine wound management shown in **Table 1 .**

Table 1: NACI Recommended Use of Immunizing Agents in Wound Management

History of Tetanus Immunization	Clean, Minor Wounds		All Other Wounds	
	Td*	**TIG † (Human)**	**Td***	**TIG† (Human)**
Uncertain or <3 doses of an immunization series‡	Yes	No	Yes	Yes
≥3 doses received in an immunization series‡	No§	No	No**	No††

* Adult-type tetanus and diphtheria toxoid.

† Tetanus immune globulin, given at a separate site from the Td.

‡ Primary immunization is at least 3 doses at age appropriate intervals.

§ Yes, if >10 years since last booster.

** Yes, if >5 years since last booster.

†† Yes, if persons are known to have a significant humoral immune deficiency state (e.g., HIV, agammaglobulinemia) since immune response to tetanus toxoid may be suboptimal.

A thorough attempt must be made to determine whether a patient has completed primary immunization. Persons who have completed primary immunization against tetanus and who sustain wounds that are minor and uncontaminated, should receive a booster dose of a tetanus toxoid-containing preparation if they have not received tetanus toxoid within the preceding 10 years. For tetanus-prone wounds (e.g., wounds contaminated with dirt, feces, soil and saliva, puncture wounds, avulsions and wounds resulting from missiles, crushing, burns or frostbite), a booster is appropriate if the patient has not received a tetanus toxoid-containing preparation within the preceding 5 years.

Administration

Inspect for extraneous particulate matter and/or discolouration before use. (see DOSAGE FORM AND STRENGTH, QUALITATIVE AND QUANTITATIVE COMPOSITION AND PACKAGING, DESCRIPTION). If these conditions exist, the product should not be administered.

Shake the vial well until a uniform, cloudy, suspension results. Cleanse the vial stopper with a suitable germicide prior to withdrawing the dose. Do not remove either the stopper or the metal seal holding it in place. Aseptic technique must be used. Use a separate sterile needle and syringe, or a sterile disposable unit for each individual recipient, to prevent disease transmission. Needles should not be recapped but should be disposed of according to biohazard waste guidelines. (See WARNINGS AND PRECAUTIONS).

Before injection, the skin over the site to be injected should be cleansed with a suitable germicide. Administer the total volume of 0.5 mL **intramuscularly** (I.M.). The preferred site of injection is the deltoid muscle.

Give the patient a permanent personal immunization record. In addition, it is essential that the physician or nurse record the immunization history in the permanent medical record of each patient. This permanent office record should contain the name of the vaccine, date given, dose, manufacturer and lot number.

4.3 CONTRAINDICATIONS

ADACEL® is contraindicated in patients who are hypersensitive to this vaccine or to a vaccine containing one or more of the same components after previous administration (because of uncertainty as to which component of the vaccine may be responsible, none of the components should be administered) or to any ingredient in the formulation, including any non-medicinal ingredient, or component of the container. For a complete listing, see DOSAGE FORMS, COMPOSITION & PACKAGING.

Acute Neurological Disorders
Encephalopathy (e.g., coma, decreased level of consciousness, prolonged seizures) within 7 days of a previous dose of a pertussis-containing vaccine not attributable to another identifiable cause is a contraindication to vaccination with any pertussis-containing vaccine, including ADACEL®.

4.4 WARNINGS AND PRECAUTIONS

General

ADACEL® is not to be used for the treatment of disease caused by *Bordetella pertussis*, *Corynebacterium diphtheriae* or *Clostridium tetani* infections.

Before administration of ADACEL®, health-care providers should inform the recipient or the parent or guardian of the recipient of the benefits and risks of immunization, inquire about the recent health status of the recipient, review the recipient's history concerning possible hypersensitivity to the vaccine or similar vaccine, previous immunization history, the presence of any contraindications to immunization and comply with any local requirements regarding information to be provided to the recipient/guardian before immunization.

It is extremely important that the recipient, parent or guardian be questioned concerning any signs or symptoms of an adverse reaction after a previous dose of vaccine. (See CONTRAINDICATIONS and ADVERSE REACTIONS).

The rates and severity of adverse events in recipients of tetanus toxoid are influenced by the number of prior doses and level of pre-existing antitoxins.

Syncope (fainting) can occur following, or even before, administration of injectable vaccines, including ADACEL®. Procedures should be in place to prevent falling injury and manage syncopal reactions.

As with any vaccine, ADACEL® may not protect 100% of vaccinated persons.

Febrile and Acute Disease: Vaccination should be postponed in cases of an acute or febrile disease. However, a disease with low-grade fever should not usually be a reason to postpone vaccination.

Hematologic

Because any intramuscular injection can cause an injection site hematoma in persons with any bleeding disorders, such as hemophilia or thrombocytopenia, or in persons on anticoagulant therapy, intramuscular injections with ADACEL® should not be administered to such persons unless the potential benefits outweigh the risk of administration. If the decision is made to administer any product by intramuscular injection to such persons, it should be given with caution, with steps taken to avoid the risk of hematoma formation following injection.

Immune

The possibility of allergic reactions in persons sensitive to components of the vaccine should be evaluated. Hypersensitivity reactions may occur following the use of ADACEL® even in persons with no prior history of hypersensitivity to the product components.

As with all other products, epinephrine hydrochloride solution (1:1,000) and other appropriate agents should be available for immediate use in case an anaphylactic or acute hypersensitivity reaction occurs. Health-care providers should be familiar with current recommendations for the initial management of anaphylaxis in non-hospital settings, including proper airway management.

Immunocompromised persons (whether from disease or treatment) may not achieve the expected immune response. If possible, consideration should be given to delaying vaccination until after the completion of any immunosuppressive treatment. Nevertheless, vaccination of persons with chronic immunodeficiency such as HIV infection is recommended even if the immune response might be limited.

Neurologic

ADACEL® should not be administered to individuals with progressive or unstable neurological disorders, uncontrolled epilepsy or progressive encephalopathy until a treatment regimen has been established, the condition has stabilized and the benefit clearly outweighs the risk.

If Guillain-Barré syndrome (GBS) occurred within 6 weeks of receipt of prior vaccine containing tetanus toxoid, the decision to give ADACEL® or any vaccine containing tetanus toxoid should be based on careful consideration of the potential benefits and possible risks.

Skin

Local reactions at injection site such as pain, swelling and erythema/redness may occur. See ADVERSE REACTIONS.

4.5 DRUG INTERACTIONS

Drug-Drug Interactions

Vaccine-Drugs Interactions:

Immunosuppressive treatments may interfere with the development of the expected immune response. (See WARNINGS AND PRECAUTIONS).

Concomitant Vaccine Administration:

ADACEL® may be administered concurrently with a dose of trivalent inactivated influenza vaccine and with a dose of hepatitis B vaccine in 11 to 12 year-olds.

The concomitant use of ADACEL® and trivalent inactivated influenza vaccine was evaluated in a clinical trial involving 696 adults 19 to 64 years of age. The safety and immunogenicity profiles in adults that received the vaccines concomitantly were comparable to those observed when the vaccines were given on separate occasions one month apart.

The concomitant use of ADACEL® and hepatitis B vaccine was evaluated in a clinical trial involving 269 adolescents 11 to 12 years of age. The safety and immunogenicity profiles in adolescents that received the vaccines concomitantly were comparable to those observed when the vaccines were given on separate occasions one month apart. No interference was observed in the immune responses to any of the vaccine antigens when ADACEL® and hepatitis B vaccines were given concurrently or separately.

Vaccines administered simultaneously should be given using separate syringes at separate injection sites and preferably in separate limbs. ADACEL® should not be mixed in the same syringe with other parenterals.

4.6 USE IN SPECIAL POPULATIONS

Pregnant Women

ADACEL® can be used during the second or third trimester of pregnancy in accordance with official recommendations (see POSOLOGY & METHOD OF ADMINISTRATION)

Safety data from 4 randomized controlled trials (310 pregnancy outcomes), 1 prospective observational study (546 pregnancy outcomes), 5 retrospective observational studies (124,810 pregnancy outcomes), and from passive surveillance of women who received ADACEL® or ADACEL-POLIO (Tdap-IPV; containing the same amounts of tetanus, diphtheria and pertussis antigens as ADACEL®) during the second or third trimester have shown no vaccine-related adverse effect on pregnancy or on the health of the fetus/newborn child. As with other inactivated vaccines, it is not expected that vaccination with ADACEL® during any trimester would harm the fetus.

Animal studies do not indicate direct or indirect harmful effects with respect to pregnancy, embryonal/fetal development, parturition or postnatal development.

For information on immune responses to vaccination during pregnancy and its effectiveness at preventing pertussis in infants, see Pharmacodynamics.

Breast-feeding

It is not known whether the active substances included in ADACEL® are excreted in human milk but antibodies to the vaccine antigens have been found to be transferred to the suckling offspring of rabbits. Two animal developmental studies conducted in rabbits have not shown any harmful effects of maternal antibodies induced by the vaccine on offspring postnatal development.

However, the effect on breast-fed infants of the administration of ADACEL® to their mothers has not been studied. As ADACEL® is inactivated, any risk to the infant is unlikely. The risks and benefits of vaccination should be assessed before making the decision to immunize a nursing woman

4.7 EFFECTS ON ABILITY TO DRIVE AND USE MACHINES

No studies on the effects on the ability to drive or use machines have been performed. ADACEL® has no or negligible influence on the ability to drive and use machines.

4.8 ADVERSE REACTIONS

Adverse Reaction Overview

The safety of ADACEL® was evaluated in a total of 5,818 participants who received a single dose of ADACEL® in 6 clinical trials (298 children ≥4 years of age, 1,508 adolescents, 2,842 adults <65 years of age and 1,170 adults ≥65 years of age).

Pain at the injection site was the most common solicited injection site reaction. Most injection site reactions occurred within 3 days following vaccination and their mean duration was less than 3 days. The most frequent systemic reaction was tiredness in children and headache in adolescents and adults (18 - 64 years). Myalgia was the most frequently reported systemic reaction among older adults ≥65 years of age. Fever was reported in less than 10% of vaccinees. These reactions were usually transient and of mild to moderate intensity. In addition, in adolescents and all adults the incidence of injection site and systemic reactions following ADACEL® was comparable to those observed with a Td vaccine booster. In children the observed frequencies of injection site reactions and fever following ADACEL® were significantly lower than those observed with QUADRACEL® (DTaP IPV) when administered as a booster at 4 to 6 years of age. Except for fever, the observed rates for the systemic reactions were comparable between the two vaccines.

Clinical Trial Adverse Reactions

Clinical trials are conducted under very specific conditions. The adverse reaction rates observed in the clinical trials; therefore, may not reflect the rates observed in practice and should not be compared to the rates in the clinical trials of another drug. Adverse reaction information from

clinical trials may be useful in identifying and approximating rates of adverse drug reactions in real-world use.
The frequency of the solicited injection site and systemic reactions reported in three clinical trials are shown in Table 2.

Two serious adverse events were reported during Study Td506 which were considered related to the vaccination: a case of severe migraine with unilateral facial paralysis, and a diagnosis of nerve compression in the neck and left arm. Both of these conditions resolved spontaneously or with treatment.

Table 2: Frequency (%) of Solicited Reactions Observed Within 0 to 14 Days in Clinical Trials in Children, Adolescents and Adults, Following a Single Dose With ADACEL®

Solicited Reactions	**Children 4 - 6 years (N = 298)**	**Adolescents 11 - 17 years (N = 1,184)**	**Adults 18 - 64 years (N = 1,752)**	**Adults ≥65 years (N = 1,153)**
Injection Site Reactions				
Pain	39.6	77.8	65.7	43.0
Swelling	24.2	20.9	21.0	18.1
Erythema	34.6	20.8	24.7	24.3
Systemic Reactions				
Fever (≥38.0°C)	8.7	5.0	1.4	0.5
Headache	16.4	43.7	33.9	18.2
Nausea	9.4	13.3	9.2	N.S.*
Diarrhea	14.4	10.3	10.3	N.S.*
Vomiting	8.1	4.6	3.0	N.S.*
Anorexia	21.5	N.S.*	N.S.*	N.S.*
Rash	8.4	2.7	2.0	N.S.*
Body Ache or Muscle Weakness † / Myalgia‡	6.4	30.4	21.9	28.4
Sore or Swollen Joints	4.0	11.3	9.1	N.S.*
Tiredness§ / Malaise**	31.5	30.2	24.3	17.2
Chills	7.1	15.1	8.1	N.S.*

Axillary Lymph Node Swelling	5.4	6.6	6.5	N.S.*

* Not Solicited

† Body ache or muscle weakness was the solicited term in the trials in children, adolescents and adults 18 - 64 years of age.

‡ Myalgia was the solicited term in the trial in adults ≥65 years of age.

§ Tiredness was the solicited term in the trials in children, adolescents and adults 18 - 64 years of age.

** Malaise was the solicited term in the trial in adults ≥65 years of age.

Table 3: Frequency (%) of Solicited Reactions Observed in Adolescents and Adults Following Re-administration of ADACEL® at 5 and 10 years Respectively

Solicited Reactions	**Re-administration of ADACEL**	
	After 5 years*	**After 10 years§**
	Adolescents and Adults 16- 69 years (N= 544)	**Adults 20 – 72 years (N= 361)**
Injection Site Reactions		
Pain	87.6	87.8
Erythema/ Redness	28.6	23.1
Swelling	25.6	20.5
Systemic Reactions		
Fever	6.5	4.2
Headache	53.2	40.6
Myalgia	61.0	60.1
Malaise	38.2	29.4

* Adverse reactions observed within 0 to 14 days after vaccination

§ Adverse reactions observed within 0 to 7 days after vaccination

Post-Market Adverse Reactions

The following additional adverse events have been spontaneously reported during the post-marketing use of ADACEL®. Because these events are reported voluntarily from a population of uncertain size, it is not always possible to reliably estimate their frequency or establish a causal relationship to vaccine exposure. Decisions to include these events in labelling were based on one or more of the following factors:

1) severity of the event, 2) frequency of reporting, or 3) strength of causal connection to ADACEL®.

Immune System Disorders

Hypersensitivity (anaphylactic) reaction (angioedema, edema, rash, hypotension)

Nervous System Disorders

Paraesthesia, hypoesthesia, Guillain-Barré syndrome, brachial neuritis, facial palsy, convulsion, syncope, myelitis

Cardiac Disorders

Myocarditis

Skin and Subcutaneous Tissue Disorders

Pruritus, urticaria

Musculoskeletal and Connective Tissue Disorders

Myositis, muscle spasm

General Disorders and Administration Site Conditions

Large injection site reactions (>50 mm) and extensive limb swelling from the injection site beyond one or both joints have been reported after administration of ADACEL® in adolescents and adults. These reactions usually start within 24 - 72 hours after vaccination, may be associated with erythema, warmth, tenderness or pain at the injection site and resolve spontaneously within 3 - 5 days. The risk appears to be dependent on the number of prior doses of acellular pertussis containing vaccine.

Injection site bruising, injection site nodule, sterile abscess

4.9 OVERDOSE

For management of a suspected drug overdose, contact your regional poison control centre.

5. PHARMACOLOGICAL PROPERTIES

5.1 Mechanism of Action

Tetanus and Diphtheria: Tetanus is an acute and often fatal disease caused by an extremely potent neurotoxin produced by *C. tetani*. The toxin causes neuromuscular dysfunction, with rigidity and spasms of skeletal muscles. Protection against disease attributable to *C. tetani* is due to the development of neutralizing antibodies to tetanus toxin.

Strains of *C. diphtheriae* that produce diphtheria toxin can cause severe or fatal illness characterized by membranous inflammation of the upper respiratory tract and toxin-induced damage to the myocardium and nervous system. Protection against disease attributable to *C. diphtheriae* is due to

the development of neutralizing antibodies to diphtheria toxin.

Pertussis: Pertussis (whooping cough) is a respiratory disease caused by *B. pertussis*. This Gram-negative coccobacillus produces a variety of biologically active components, though their role in either the pathogenesis of, or immunity to, pertussis has not been clearly defined. The mechanism of protection from *B. pertussis* disease is not well understood.

5.2 Pharmacodynamics

Tetanus and Diphtheria:

A serum tetanus antitoxin level of at least 0.01 IU/mL, measured by neutralization assay, is considered the minimum protective level. A tetanus antitoxin level of at least 0.1 IU/mL as measured by the ELISA used in clinical studies of ADACEL® is considered as protective for tetanus. Levels of 1.0 IU/mL have been associated with long-term protection.

A serum diphtheria antitoxin level of 0.01 IU/mL is the lowest level giving some degree of protection. Antitoxin levels of at least 0.1 IU/mL are generally regarded as protective. Levels of 1.0 IU/mL have been associated with long-term protection.

Pertussis:

In a clinical trial in Sweden (Sweden I Efficacy Trial), the same pertussis components as in ADACEL® (i.e., PT, FHA, PRN and FIM) have been shown to prevent pertussis in infants with a protective efficacy of 85.2% using the World Health Organization (WHO) case definition (≥21 consecutive days of paroxysmal cough with culture or serologic confirmation or epidemiological link to a confirmed case). In the same study, the protective efficacy against mild disease was 77.9%. A household contact study that was nested in this efficacy trial demonstrated that there were statistically significant correlations between clinical protection and the presence of antibodies against PT, PRN and FIM in pre-exposure sera.

Minimum serum antibody levels to specific pertussis vaccine components that confer protection against the development of clinical pertussis have not been identified. Nevertheless, a number of studies have demonstrated a correlation between the presence of serum antibody responses to pertussis vaccine components and protection against clinical disease. In ADACEL® clinical trials, in children, adolescents and adults <65 years of age, post-vaccination Geometric Mean Concentrations (GMCs) for all pertussis antibodies were consistently above those of TRIPACEL® in the Sweden I Efficacy Trial. Older adults (≥65 years of age) vaccinated with a single dose of ADACEL® achieved lower GMCs for some of the pertussis antibodies than did infants who had received 3 or 4 doses of TRIPACEL®. Nevertheless, their post-immunization anti-pertussis antibody levels were 4.4- to 15.1-fold higher than pre-immunization levels, suggested an improved degree of protection against pertussis.

Immunogenicity in pregnant women

Pertussis antibody responses in pregnant women are generally similar to those in non pregnant women. Vaccination during the second or third trimester of pregnancy is optimal for antibody transfer to the developing fetus.

Immunogenicity against pertussis in infants (<3 months of age) born to women vaccinated during pregnancy

Data from 2 published randomized controlled trials demonstrate higher pertussis antibody concentrations at birth and at 2 months of age, (ie, prior to the start of their primary vaccinations) in infants of women vaccinated with ADACEL® during pregnancy compared with infants of women not vaccinated against pertussis during pregnancy.

In the first study, 33 pregnant women received ADACEL® and 15 received saline placebo at 30 to 32 weeks gestation. The geometric mean concentrations (GMC) in EU/mL for the anti-pertussis antibodies to the PT, FHA, PRN, and FIM antigens in infants of vaccinated women were, respectively, 68.8, 234.2, 226.8, and 1867.0 at birth, and 20.6, 99.1, 75.7, and 510.4 at 2 months of age. In the control-group infants, the corresponding GMCs were 14.0, 25.1, 14.4, and 48.5 at birth, and 5.3, 6.6, 5.2, and 12.0 at 2 months. The GMC ratios (ADACEL®/control group) were 4.9, 9.3, 15.8, and 38.5 at birth, and 3.9, 15.0, 14.6, and 42.5 at 2 months.

In the second study, 134 pregnant women received ADACEL® and 138 received a tetanus and diphtheria control vaccine at a mean gestational age of 34.5 weeks. The GMCs (EU/mL) for the anti-pertussis antibodies to the PT, FHA, PRN, and FIM antigens in infants of vaccinated women were, respectively, 54.2, 184.2, 294.1, and 939.6 at birth, and 14.1, 51.0, 76.8, and 220.0 at 2 months of age. In the control-group infants, the corresponding GMCs were 9.5, 21.4, 11.2, and 31.5 at birth, and 3.6, 6.1, 4.4, and 9.0 at 2 months. The GMC ratios (ADACEL®/control group) were 5.7, 8.6, 26.3, and 29.8 at birth, and 3.9, 8.4, 17.5, and 24.4 at 2 months.

These higher antibody concentrations should provide passive immunity against pertussis for the infant during the first 2 to 3 months of life, as has been shown by observational effectiveness studies.

Immunogenicity in infants and toddlers born to women vaccinated during pregnancy
For infants of women vaccinated with ADACEL® or ADACEL-POLIO during pregnancy, the immunogenicity of routine infant vaccination was assessed in several published studies. Data on the infant response to pertussis and non-pertussis antigens were evaluated during the first year of life.

Maternal antibodies derived after ADACEL® or ADACEL-POLIO vaccination in pregnancy may be associated with blunting of the infant immune response to active immunization against pertussis. Based on current epidemiological studies, this blunting may not have clinical relevance.

Data from several studies did not show any clinically relevant blunting from vaccination in pregnancy with ADACEL® or ADACEL-POLIO and the infants' or toddlers' responses to diphtheria, tetanus, *Haemophilus influenzae* type b, inactivated poliovirus, or pneumococcal antigens.

Effectiveness against pertussis in infants born to women vaccinated during pregnancy

The vaccine effectiveness in the first 2-3 months of life for infants born to women vaccinated against pertussis during the third trimester of pregnancy has been evaluated in 3 observational studies. The overall effectiveness is > 90%.

Table 4: Vaccine effectiveness (VE) against pertussis disease in young infants born to mothers vaccinated during pregnancy with Adacel or ADACEL-POLIO in 3 retrospective studies

Location	Vaccine	VE (95% CI)	VE estimation method	Infant follow-up period
UK	ADACEL POLIO	93% (81, 97)	unmatched case-control	2 months
US	Adacel*	91.4% (19.5, 99.1)	cohort regression model	2 months
UK	ADACEL-POLIO	93% (89, 95)	screening (case-coverage)	3 months

* Approximately 99% of women were vaccinated with Adacel

5.3 Pharmacokinetics

Duration of Effect

Long-term follow-up of serum antibody levels in adolescents and adults who received a single dose of ADACEL® show that protective levels for tetanus antitoxin (≥0.01 EU/mL) and diphtheria antitoxin (≥0.01 IU/mL) persist in 99.2% and 92.6% of participants, respectively, 10 years post-vaccination. While protective levels against pertussis have not yet been clearly defined, pertussis antibody levels remain 2 to 9 fold higher than pre-immunization levels after 5 years. However at 10 years post-vaccination pertussis antibody levels were observed to decline towards pre-vaccination levels.

Tetanus and diphtheria toxoid boosters are recommended every 10 years. The serology follow-up and redosing data for ADACEL® suggest that it can be used instead of tetanus and diphtheria toxoid vaccine for boosting at 10-year intervals in adults.

6. NON-CLINICAL TOXICOLOGY

Non-clinical data revealed no special hazard for humans based on conventional studies of repeated dose toxicity and toxicity in pregnancy, embryonal/foetal development, parturition and postnatal development.

7. DESCRIPTION

ADACEL® is supplied as a sterile uniform, cloudy, white suspension in a vial.

Each dose (0.5 mL) is formulated to contain: Tetanus Toxoid (5 Lf); Diphtheria Toxoid (2 Lf); Acellular Pertussis [Pertussis Toxoid (PT), 2.5 mcg; Filamentous Haemagglutinin (FHA), 5 mcg; Pertactin (PRN), 3 mcg and Fimbriae Types 2 and 3 (FIM), 5 mcg].

The non-medicinal ingredients are as follows: Aluminum Phosphate (1.5 mg) and 2-phenoxyethanol
(0.6% v/v).

8. PHARMACEUTICAL PARTICULARS

8.1 INCOMPATIBILITIES

In the absence of compatibility studies, ADACEL® must not be mixed with other medicinal products.

8.2 SHELF LIFE

Refer outer carton

8.4 PACKAGING INFORMATION

ADACEL® is supplied in 0.5 mL single dose glass vials.

The vials are made of Type 1 glass. The container closure system of ADACEL® is free of latex (natural rubber).

ADACEL® is available in a package of

1 single dose vial
5 single dose vials
Not all pack sizes may be marketed.

8.4 STORAGE AND HANDLING INSTRUCTIONS

Store at 2° to 8°C (35° to 46°F). **Do not freeze**. Discard product if exposed to freezing (≤ 0°C).

Do not use after expiration date.

9. PATIENT COUNSELING INFORMATION

Not applicable

10. DETAILS OF MANUFACTURER

Manufactured by:
Sanofi Pasteur Limited
1755 Steeles Avenue West
Toronto Ontario (Canada) M2R3T4

Imported & Marketed in India by:
Sanofi Healthcare India Private Limited
Gala No. 4, Ground Floor, Building No. B1,City Link Warehousing Complex, S No. 121/10/A, 121/10/B & 69, NH3 Vadape Tal-Bhiwandi 16, Thane Z5, Maharashtra, Bhiwandi, Thane-421302 (India)

11. DETAILS OF PERMISSION NUMBER WITH DATE

Import-877/08 dtd. 21st August 2008

12. DATE OF REVISION: AUGUST 2023

Source: EU SmPC dated July 2021 and Canada Product Monograph dated 22nd December 2022