AUSTRALIAN PRODUCT INFORMATION
ACT-HIB *HAEMOPHILUS* TYPE B CONJUGATE VACCINE (CONJUGATED TO TETANUS PROTEIN)

1 NAME OF THE MEDICINE

Act-HIB *Haemophilus* Type b Conjugate Vaccine (conjugated to tetanus protein)

Haemophilus Type b polysaccharide

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

Act-HIB contains the capsular polysaccharide of the *Haemophilus influenzae* type b bacterial strain conjugated to tetanus protein. The polysaccharide consists of polyribosyl ribitol phosphate (PRP).

Active Ingredients:
Haemophilus type b polysaccharide (10 micrograms) conjugated to tetanus protein (18-30 micrograms).

For the full list of excipients, see Section 6.1 List of excipients.

3 PHARMACEUTICAL FORM

Act-HIB is a freeze-dried powder for reconstitution with diluent for injection. Following reconstitution, the solution is limpid and colourless.

4 CLINICAL PARTICULARS

4.1 THERAPEUTIC INDICATIONS

Act-HIB is indicated for use in infants from 2 months to 5 years of age for active immunization against invasive disease caused by the *Haemophilus influenzae* type b.

The vaccine does not protect against infections due to other types of *Haemophilus influenzae* nor against meningitis from other origins.

NOTE: Under no circumstances should the tetanus protein component of this vaccine be substituted for the routine Tetanus vaccination.

4.2 DOSAGE AND METHOD OF ADMINISTRATION

After reconstitution, the vaccine should be administered via the intramuscular or subcutaneous route.

The preferred injection site for children under 2 years of age is anterolateral thigh. In older children the vaccine may be given at the anterolateral thigh or deltoid region.

Vaccine injections should not be given in the dorsogluteal site or upper outer quadrant of the buttock because of the possibility of a suboptimal immune response.

For further information, refer to the current Immunisation Handbook.

Infants:

2-6 months age – 3 injections at 1 or 2 month intervals.

7-11 months age – 2 injections at 1 or 2 months intervals.

This is followed in both cases by a booster at 18 months.

In children over 12 months: A single injection.

The reconstituted product must be used immediately after reconstitution.

Once reconstituted, the vaccine must not be mixed with any other vaccine or medicinal product. Therefore, separate injection sites and different syringes should be used in case of concomitant administration.

Act-HIB is for single use only and must not be used in more than one individual. Discard any remaining unused contents.

Act-HIB can be incorporated into the recommended childhood immunization schedule, in accordance with the DTP schedule. However, the administration of Act-HIB should be carried out in a different site from those used for the other recommended vaccinations: Diphtheria, Tetanus, Pertussis, Poliomyelitis and Measles, Mumps and Rubella.

4.3 CONTRAINDICATIONS

Known systemic hypersensitivity to any component of Act-HIB in particular the tetanus protein or formaldehyde. Life-threatening reaction after previous administration of the vaccine or vaccine containing the same substances.

Vaccination must be postponed in case of febrile or acute disease.

4.4 SPECIAL WARNINGS AND PRECAUTIONS FOR USE

As with all injectable vaccines, appropriate medical treatment and supervision should always be readily available in case of an anaphylactic event following administration of the vaccine.

Do not administer by intravascular injection: ensure that the needle does not penetrate a blood vessel.

As with all injectable vaccines, the vaccine must be administered with caution to subjects with thrombocytopenia or a bleeding disorder since bleeding may occur following an intramuscular administration to these subjects.

Prior to administration of any dose of Act-HIB, the parent or guardian of the recipient must be asked about their personal history, family history, and recent health status, including immunisation history, current health status and any adverse event after previous immunisations. In subjects who have a history of serious or severe reaction within 48 hours of a previous injection with a vaccine containing similar components, the course of the vaccination must be carefully considered.

The anticipated antibody response may not be obtained in individuals with impaired immune function due to drugs or disease.

Experience with native populations (Alaska, Native American Indians) generally suggests that response to all conjugated *Haemophilus influenzae* type b vaccines in these populations may be significantly lower than in Caucasians. The possibility of a lower antibody response in the Australian aboriginal population should be borne in mind.

As with most vaccines, the expected antibody response may not be achieved in 100% of cases.

Information is currently lacking on the value of vaccinating with Act-HIB after exposure to infection.

Cases of *Haemophilus influenzae* type b disease may occur in the weeks after vaccination prior development of an adequate antibody response.

The potential risk of apnoea and the need for respiratory monitoring for 48-72 h should be considered when administering the primary immunisation series to very premature infants (born ≤ 28 weeks of gestation) and particularly for those with a previous history of respiratory immaturity. As the benefit of vaccination is high in this group of infants, vaccination should not be withheld or delayed.

The tip caps of the prefilled syringes contain a natural rubber latex derivative, which may cause allergic reactions in latex sensitive individuals.

Syncope can occur following, or even before, any vaccination as a psychogenic response to the needle injection. Procedures should be in place to prevent falling and injury and to manage syncope.

Use in the Elderly

No data available.

Paediatric Use

See section 4.4 Special warnings and precautions for use.

Effects on Laboratory Test

No data available.

4.5 INTERACTIONS WITH OTHER MEDICINES AND OTHER FORMS OF INTERACTIONS

Concurrent administration of Act-HIB and DTP vaccines results in a somewhat lower antibody response to the diphtheria and pertussis components, although the levels are above those considered to be protective.

4.6 FERTILITY, PREGNANCY AND LACTATION

Effects on Fertility

No data available.

Use in Pregnancy (Category B2)

Vaccination of adults against Hib is uncommon. Data on the use of this vaccine in pregnant women are limited. Therefore, administration of the vaccine during pregnancy is not recommended. Act-HIB should be given to pregnant women only if clearly needed and following an assessment of the risks and benefits.

Use in Lactation

Vaccination of adults against Hib is uncommon. It is not known whether Act-HIB is secreted in human milk. Caution must be exercised when Act-HIB is administered to a nursing mother.

4.7 EFFECTS ON ABILITY TO DRIVE AND USE MACHINES

No studies on the effects on the ability to drive and use machines have been performed.

4.8 ADVERSE EFFECTS (UNDESIRABLE EFFECTS)

Clinical Trials Experience

In studies on healthy children aged 2 months or more, Act-HIB was generally well tolerated. The following adverse effects were observed during the 72 hours after vaccination:

Local:
Erythema, induration at the injection site, pain, swelling and/or inflammation.

Systemic:
Irritability, unusual tiredness, rhinorrhoea, crying, fever, diarrhoea and vomiting.

Rare Events:
During studies with *Haemophilus influenzae* type b polysaccharide vaccines, convulsions, early onset Haemophilus b disease and Guillain Barre Syndrome have occurred rarely. However, a causal relationship between these side effects and the vaccination was not established. As with any vaccine, there is the possibility that broad use of Act-HIB could reveal adverse reactions not observed in clinical trials.

Adverse Reactions from Post-Marketing Surveillance

Based on spontaneous reporting, the following adverse events have also been reported after commercial use. As exact incidence rates cannot be calculated precisely, their frequency is qualified as “Not known".

Immune system disorders:

- Hypersensitivity reactions

Nervous system disorders:

- Convulsions (with or without fever)

Skin and subcutaneous tissue disorders:

- Urticaria, rash generalised, rash, pruritus

- Face oedema, laryngeal oedema (suggestive of a possible hypersensitivity reaction)

General disorders and application site conditions:

- Extensive limb swelling of the vaccinated limb (from the injection site beyond one or both joints)

- Large injection site reactions (>50 mm) such as pain, erythema, swelling and/or inflammation, or indurations

- Oedema of lower limbs
  Oedematous reaction affecting one or both lower limbs may occur following vaccination with *Haemophilus influenzae* type b containing vaccines. If this reaction occurs, it does so mainly after primary injections and is observed within the first few hours following vaccination. Associated symptoms may include cyanosis, redness, transient purpura and severe crying.

Reporting of Suspected Adverse Effects

Reporting suspected adverse reactions after registration of the medicinal product is important. It allows continued monitoring of the benefit-risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions at http://www.tga.gov.au/reporting-problems.

4.9 OVERDOSE

For information on the management of overdose, contact the Poisons Information Centre on 13 11 26 (Australia).

5 PHARMACOLOGICAL PROPERTIES

5.1 PHARMACODYNAMIC PROPERTIES

Therapeutic Class

J07A (Bacterial vaccines) / G (*Haemophilus influenzae* B vaccines) / 01 (*Haemophilus influenzae* B, purified antigen conjugated)

When administered to humans Act-HIB results in an IgG specific anti-PRP response in infants. This response is T-lymphocyte dependent and is characterised by establishment of immunological memory. Antibody response appears to be greater following subcutaneous administration as compared to intramuscular administration.

Although information on the protective efficacy of the Act-HIB from field trials is limited, Act-HIB has been shown to induce antibody levels well above those known to be protective against invasive disease due to *Haemophilus influenzae* type b bacterial strains, in 97-100% vaccinees.

Antibodies generated by Act-HIB are directed against infection caused by the *Haemophilus influenzae* type b bacterial strain only, Act-HIB does not generate antibodies against other organisms, including other strains of *Haemophilus influenzae*.

Study of the functional activity of the anti-PRP antibodies induced by Act-HIB (Haemophilus b conjugate vaccine) in infants and children, showed opsonization and intracellular phagocytic killing properties.

5.2 PHARMACOKINETIC PROPERTIES

No pharmacokinetic studies have been performed.

5.3 PRECLINICAL SAFETY DATA

No data available.

Genotoxicity

No data available.

Carcinogenicity

No data available.

6 PHARMACEUTICAL PARTICULARS

6.1 LIST OF EXCIPIENTS

- Trometamol
- Sucrose
- Sodium chloride
- Water for injection

No antimicrobial preservative is added.

6.2 INCOMPATIBILITIES

DO NOT MIX Act-HIB IN THE SAME SYRINGE AS OTHER VACCINES OR MEDICINAL PRODUCTS.

6.3 SHELF LIFE

36 months.

6.4 SPECIALS PRECAUTIONS FOR STORAGE

Store at 2˚C to 8˚C (Refrigerate. Do not freeze). Do not use after the expiry date.

6.5 NATURE AND CONTENTS OF CONTAINER

Single dose vial with powder for reconstitution and 0.5 mL diluent syringe with or without separate needles.

Pack of 1 or 10.

Not all pack sizes may be marketed.

6.6 SPECIAL PRECAUTIONS FOR DISPOSAL

After use, any remaining vaccine and container must be disposed of safely according to locally agreed procedures.

6.7 PHYSICOCHEMICAL PROPERTIES

Not applicable.

7 MEDICINE SCHEDULE (POISONS STANDARD)

S4 Prescription Only Medicine

8 SPONSOR

sanofi-aventis australia pty ltd
12-24 Talavera Road
Macquarie Park NSW 2113
Freecall: 1800 818 806
Email: medinfo.australia@sanofi.com

9 DATE OF FIRST APPROVAL

8 April 1993

10 DATE OF REVISION

16 October 2024

SUMMARY TABLE OF CHANGES

Section Changed	Summary of new information
6.5	Update to packaging contents