Summary of Product Characteristics

1 NAME OF THE MEDICINAL PRODUCT

Infanrix-Hib Powder and suspension for suspension for injection

Diphtheria, tetanus, pertussis (acellular, component) and haemophilus type B conjugate vaccine (adsorbed)

2 QUALITATIVE AND QUANTITATIVE COMPOSITION

1 dose (0.5 ml) of vaccine contains:

Diphtheria toxoid[1]		not less than 30.00	IU
Tetanus toxoid[1]		not less than 40.00	IU
Bordetella pertussis antigens			
	Pertussis toxoid[1]	25.00	micrograms
	Filamentous haemagglutinin[1]	25.00	micrograms
	Pertactin[1]	25.00	micrograms
Haemophilus tybe b polysaccharide (polyribosylribitol phosphate)		10.00	micrograms
conjugated to tetanus toxoid as carrier protein		approximately 30.00	micrograms

[1]Adsorbed on aluminium hydroxide, hydrated 0.5 milligrams $A1^{3+}$

For excipients, *see section 6.1*

3 PHARMACEUTICAL FORM

Powder and suspension for suspension for injection.

4 CLINICAL PARTICULARS

4.1 Therapeutic Indications

Infanrix-Hib' is indicated for active primary immunisation against diphtheria, tetanus and pertussis and Hib from the age of two months onwards and as a booster dose for children who have previously been immunised with three doses of DTPa or DTPw or 'Infanrix-Hib' vaccine according to the national policy in effect at the time.

'Infanrix-Hib is not suitable for use in children over 36 months.

4.2 Posology and method of administration

Adults and elderly: Not recommended.

Children (up to 36 months): 0.5ml of the vaccine by deep intramuscular injection.

The primary immunisation course consists of three doses at two, four and six months.

Booster dose

Following completion of the primary immunisation series, an additional booster dose of a Hib conjugate vaccine (either monovalent or combined) should be administered.

A booster dose of DTP should be given according to the national policy in effect at the time.

4.3 Contraindications

As with other vaccines, the administration of 'Infanrix-Hib' should be postponed in subjects suffering from acute severe febrile illness. The presence of a minor infection, however, is not a contra-indication.

'Infanrix-Hib' should not be administered to subjects with known hypersensitivity to any component of the vaccine or to subjects having shown signs of hypersensitivity after previous administration of 'Infanrix', diphtheria tetanus, pertussis vaccine, DTPw, Hib or 'Infanrix-Hib'.

Infanrix-Hib is contraindicated if the child has experienced an encephalopathy of unknown aetiology, occurring within 7 days, following previous vaccination with pertussis containing vaccine. In these circumstances the vaccination course should be continued with diphtheria, tetanus and Hib vaccines.

4.4 Special warnings and precautions for use

It is good clinical practice that immunisation should be preceded by a review of the medical history (especially with regard to previous immunisation and possible occurrence of undesirable events) and a clinical examination.

If any of the following events occur in temporal relation to receipt of DTP-containing vaccines, the decision to give subsequent doses of vaccine containing the pertussis component should be carefully considered. There may be circumstances, such as a high incidence of pertussis, when the potential benefits outweigh possible risks, particularly since these events are not associated with permanent sequelae.

The following events were previously considered contra-indications for DTPw but can be now be considered to be general precautions for 'Infanrix-Hib':

Temperature of ≥ 40.5C within 48 hours of vaccination, not due to another identifiable cause.

Collapse or shock-like state (hypotonic-hyporesponsive episode) within 48 hours of vaccination.

Persistent, inconsolable crying lasting ≥ 3 hours, occurring within 48 hours of vaccination.

Convulsions with or without fever, occurring within three days of vaccination.

A history of febrile convulsions and a family history of convulsive fits do not constitute contra-indications.

HIV infection is not considered as a contra-indication

As with all vaccinations, a solution of 1:1000 adrenaline should be available for injection should an anaphylactic reaction occur. Recipients of the vaccine should remain under observation until they have been seen to be in good health and not to be experiencing an immediate adverse reaction. It is not possible to specify an exact length of time.

The vaccine should be given by deep intramuscular injection.

'Infanrix-Hib' should under no circumstances be administered intravenously.

'Infanrix-Hib' should be administered subcutaneously with caution to subjects with thrombocytopenia or bleeding disorders since bleeding may occur following an intramuscular administration to these subjects.

Excretion of capsular polysaccharide antigen in the urine has been described following receipt of Hib vaccines and therefore antigen detection may not have a diagnostic value in suspected Hib disease within one to two weeks of

vaccination.

4.5 Interaction with other medicinal products and other forms of interaction

'Infanrix-Hib' can be administered in any temporal relationship with other childhood vaccines.

Different injectable vaccines should always be administered at different injection sites.

In patients receiving immunosuppressive therapy or patients with immunodeficiency an adequate immunologic response may not be achieved.

4.6 Fertility, pregnancy and lactation

As 'Infanrix-Hib' is not intended for use in adults, information on the safety of the vaccine when used during pregnancy or lactation is not available.

4.7 Effects on ability to drive and use machines

Not applicable

4.8 Undesirable effects

Adverse effects observed in clinical studies and post marketing surveillance are listed below as MedDRA preferred term by system organ class and frequency. Frequencies are defined as: very common > 1/10; common >1/100, < 1/10; uncommon >1/1,000,<1/100; rare >1/10,000, <1/1,000; very rare <1/10,000

Clinical Studies

Primary vaccination
Solicited adverse events

Application site
Very common: swelling (<2cm), redness (<2cm), pain (minor or cried/protested on touch)
Uncommon: swelling(> 2cm), redness (>2cm), pain (infant cried when limb moved/spontaneously painful).

Body as a whole:
Very common: unusual crying
Common: fever($\geq$ 38.0^{o}C rectal)
Uncommon: fever (>39.5^{o}C rectal)

Central and peripheral nervous system:
Very common: restlessness

Gastrointestinal system:
Very common: diarrhoea, loss of appetite
Common: vomiting

Psychiatric:
Very common: Somnolence

Booster vaccination
Solicited adverse events:

Application site
Very common: redness (>2cm), swelling (<2cm), pain (minor or cried/protested on touch), redness (<2cm).
Common: swelling(> 2cm),
Uncommon: pain (infant cries when limb is moved/spontaneously painful).

Body as a whole:
Very common: fever($\geq$ 38.0^{o}C rectal), unusual crying
Uncommon: fever (>39.5^{o}C rectal)

Central and peripheral nervous system:
Very common: restlessness

Gastrointestinal system:
Very common: diarrhoea, loss of appetite
Common: vomiting

Psychiatric:
Very common: Somnolence

Following administration of booster vaccine (2,087 doses administered), convulsions and febrile convulsions were uncommonly reported. No casual link between these adverse events and either component has been established.

Post Marketing Surveillance

Body as a whole:
Very rare: allergic reactions including anaphylactoid reactions

Central and peripheral nervous system:
Very rare: convulsions within 2-3 days of vaccination, collapse or shock-like state (hypotonic-hyporesponsiveness episode).

As observed with other DTPa-containing vaccines, cases of extensive swelling of the injected limb, involving an increase of circumference and sometimes involving the entire injected limb, have been very rarely reported. These reactions in general began within 48 hours of vaccination and have been spontaneously resolved over an average of 4 days without sequelae.

4.9 Overdose

Not applicable.

5 PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

ATC code: J07AAG52.

DTPa component
One month after the primary vaccination course more than 99.6% of infants vaccinated with 'Infanrix-Hib' had antibody titres of ≥0.1 IU/ml to tetanus and diphtheria. The mean vaccine response to the pertussis antigens (PT, FHA, pertactin) was 97.7%.

Following administration of 'Infanrix-Hib' booster in the second year of life, 100% of infants had antibody titres of ≥0.1 IU/ml to both diphtheria and tetanus. The booster response to the pertussis antigens was seen in 100% of these infants.

The protective efficacy of a primary vaccination course of 'Infanrix' against typical pertussis (as defined by World Health Organisation) was assessed up until the time of booster in a prospective household contact study. Based on data collected from secondary contacts in households where there was an index case with typical pertussis, the protective efficacy of the vaccine was 88.7%, with a two-sided 95% confidence interval of 76.6% to 94.6%.

Hib component:
A titre of ≥0.15 micrograms/ml was obtained in 95-100% of infants one month after the completion of the primary vaccination course. A titre of ≥0.15 micrograms/ml was obtained in 100% of infants one month after the booster dose and all infants had a titre of 1≥micrograms/ml with 95.5% over 10 micrograms/ml.

5.2 Pharmacokinetic properties

There are no preclinical safety data of relevance to the prescriber which are not included in others sections of the SmPC

5.3 Preclinical safety data

Preclinical safety data reveal no special hazard for humans based on conventional studies of safety, specific toxicity and compatibility of ingredients.

6 PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Liquid DTPa component:
Sodium chloride
2-phenoxyethanol
Water for injections

Lyophilised HIB component:
Lactose

For adjuvants, see section 2.

6.2 Incompatibilities

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

6.3 Shelf life

24 months

6.4 Special precautions for storage

'Infarnix-Hib' should be stored in a refrigerator at 2^{o}C to 8^{o}C.
Store in original container in order to protect from light.
Do not freeze. Discard if it has been frozen.

6.5 Nature and contents of container

Powder in vial (type I glass) with stopper (chlorobutyl).
0.5 ml of suspension in prefilled syringe (type I glass). Pack size of 1.

6.6 Special precautions for disposal of a used medicinal product or waste materials derived from such medicinal product and other handling of the product

Upon storage of the DTPa suspension, a white deposit and clear supernatant can be observed in the vial. This is not a sign of deterioration.

The DTPa in the vial should be well shaken to obtain a homogeneous suspension.

The DTPa suspension, the Hib powder in the vial and the reconstituted vaccine should be inspected visually for any foreign particulate matter and/or abnormal physical appearance prior to administration. In the event either is observed, the vaccine should be discarded.

The vaccine is reconstituted by adding the entire contents of the prefilled of DTPa suspension to the vial containing the Hib powder. The mixture should then be injected immediately.

7 MARKETING AUTHORISATION HOLDER

GlaxoSmithKline (Ireland) Ltd
Stonemasons Way
Rathfarnham
Dublin 16
Ireland

8 MARKETING AUTHORISATION NUMBER

PA 1077/028/002

9 DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

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Date of last renewal: 26 January 2006

10 DATE OF REVISION OF THE TEXT

February 2007