Size : 95 x 245 mm

For the use of a Registered Medical Practitioner or a Hospital or a Laboratory only

Diphtheria, Tetanus, Pertussis (Whole Cell) and *Haemophilus influenzae* Type b Conjugate Vaccine (Adsorbed) IP

[Easyfour®-TT]

Fully Liquid Tetravalent Vaccine

DESCRIPTION

Easyfour®-TT is a sterile and uniform suspension of Diphtheria toxoid, Tetanus toxoid, whole cell Pertussis vaccine, conjugated *Haemophilus influenzae* type b (PRP-TT) vaccine adsorbed on aluminium phosphate gel and suspended in isotonic sodium chloride solution. Diphtheria and tetanus toxoids are obtained by detoxification of respective toxins by formalin. Pertussis vaccine is a suspension of heat-killed Bordetella pertussis of all the three major agglutinogens viz. 1, 2 and 3. *Haemophilus influenzae* type b (PRP-TT) vaccine is derived from highly purified capsular polysaccharide isolated from *Haemophilus influenzae* type b coupled with Tetanus toxoid.
The final product has an appearance of a white or almost white material which sediments at the bottom of the container defining two phases: a clear supernatant essentially protein-free composed of physiological saline with the preservative substance dissolved, plus a aluminium phosphate gel with the antigen adsorbed on it. When shaken, a white or almost white suspension is formed, lasting for some minutes, which is the form in which the product is to be administered.

COMPOSITION

One dose of 0.5 ml contains:

Diphtheria Toxoid*	20 Lf (30 IU)
Tetanus Toxoid*	7.5 Lf (60 IU)
Inactivated w-*B.pertussis**	12 IOU (4 IU)
Hib (PRP-TT)	10 µg
(Hib PRP conjugated with carrier protein Tetanus Toxoid)	
Aluminium content (Al^{3+}) (as Aluminium Phosphate Gel)	0.25 mg
Thiomersal	0.025 mg
Physiological Saline	q.s.

*Bulk source : PT. BioFarma, Indonesia

INDICATION

Easyfour®-TT is indicated for primary active immunization against diphtheria, tetanus, pertussis and infections caused *Haemophilus influenzae* type b [Hib] in infants from 6 weeks onwards. Three vaccine doses must be administered at interval of at least 4 weeks. A booster vaccine dose should be administered at 15-18 months of age

PHARMACOLOGICAL PROPERTIES

Immunogenicity of **Easyfour®-TT** vaccine was evaluated in 6, 10, 14 weeks schedule (3 doses given at 4 weekly intervals). The immune responses for the four components of the vaccine after 1 month completion of 3-dose primary vaccination schedule were as follows:
Anti-diphtheria antibodies:
>99.16% subjects developed protective antibody titers
Anti-tetanus antibodies:
100 % of subjects developed protective antibody titers
The pertussis PT response rate (⩾ 4 fold increase) was 73.95%
Anti-Hib antibodies:
100% of subjects developed protective antibody titers

CONTRAINDICATIONS

Easyfour®-TT vaccine should not be administered to subjects with known hypersensitivity to any component of the vaccine, or to subjects shown signs of hypersensitivity after previous administration of diphtheria, tetanus and pertussis or Hib vaccines.
Easyfour®-TT vaccine is contra-indicated if the child has experienced an encephalopathy of unknown etiology, occurring within 7 days following previous vaccination with pertussis containing vaccine. In these circumstances the vaccination course should be continued with DT and Hib vaccines.

SPECIAL WARNING AND PRECAUTION

As with other vaccines, the administration of **Easyfour®-TT**vaccine should be postponed in subjects suffering from acute severe febrile illness.
Vaccination should be preceded by a review of the medical history (especially with regard to previous vaccination and the possible occurrence of undesirable events) and a clinical examination.
If any of the following events occur in temporal relation to the administration of **Easyfour®-TT vaccine** the decision to give subsequent doses of vaccine containing the pertussis component should be carefully considered:

- Temperature of >40.0 ˚C within 48 hours, not due to another identifiable cause
- Collapse or shock-like state (hypotonic-hypo responsive episode) within 48 hours
- Persistent crying lasting >3 hours, occurring within 48 hours
- Convulsions with or without fever, occurring within 3 days.

A history of febrile convulsions, a family history of convulsions, a family history of SIDS (Sudden Infant Death Syndrome) or a family history of an adverse event following **Easyfour®-TT** vaccination does not constitute contra-indications.
HIV infection is not considered as a contra-indication for diphtheria, tetanus, pertussis and Hib vaccination. The expected immunological response may not be obtained after vaccination of Immunosuppressed patients, e.g. patients on immunosuppressive therapy.
As with all injectable vaccines, appropriate medical treatment should always be readily available in case of anaphylactic reactions following the administration of the vaccine. For this reason, the vaccinee should remain under medical supervision for 30 minutes after vaccination.
Easyfour®-TT vaccine should under no circumstances be administered intravenously or subcutaneously.

INTERACTIONS

Easyfour®-TT may be administered at the same time as other vaccines (like OPV, HBV) or human immunoglobulins; however injections must be carried out using different syringe at a separate site. The immunological response of the vaccine may be reduced in patients undergoing therapy with corticosteroids or immunosuppressant.

ADVERSE REACTIONS

Local symptoms like redness, swelling and pain may be observed after the administration of the vaccine. A small lump may occasionally be noted in the site of the inoculation that disappears after few days.
Systemic symptoms occasionally observed include the fever, drowsiness, irritability, persistent crying, loss of appetite, vomiting and diarrhoea. If the onset of these symptoms occurs within 48 hours after the administration of the vaccine they will in the majority of cases disappear spontaneously.
In a randomized clinical study of **Easyfour®-TT** *(Panacea Biotec Ltd) with comparator tetravalent vaccine in healthy inf*ants following adverse events were reported:
Number of Different Adverse events

Different AEs	Number of different AEs		
	Easyfour®-TT Arm	Comparator Arm	Total
All Adverse Events (AEs)	270(42.38%)	367(57.61%)	637
All Unsolicited AEs *	1(25%)	3(75%)	4
All solicited AEs	269(42.49%)	364(57.5%)	633
Solicited Local AEs	157(44.10%)	199(55.89%)	356
Pain/ Tenderness	92(48.67%)	97(51.32%)	189
Redness	24(35.29%)	44(64.70%)	68
Swelling	41(41.41%)	58(58.58%)	99
Solicited Systemic AEs	112 (40.43%)	165(59.56%)	277
Fever	73(43.71%)	94(56.28%)	167
Acute allergic reaction	1(33.33%)	2(66.66%)	3
Excessive Sleepiness/ Drowsiness	8(36.36%)	14(63.63%)	22
Irritability/ restlessness/fussiness	15(34.88%)	28(65.11%)	43
Vomiting	8(38.09%)	13(61.90%)	21
Diarrhea	7(33.33%)	14(66.66%)	21

* : one unsolicited AE in **Easyfour®-TT** arm (convulsions); three unsolicited AEs in comparator arm i.e. tetravalent vaccine (two URTI and one hypotonia)

To report SUSPECTED ADVERSE REACTIONS, please contact Panacea Biotec Ltd., G-3. B-1 Ext., M.C.I.E, Mathura Road, New Delhi 110044, India, at any of the following contact details : e-mail id: pvg@panaceabiotec.com; Fax No.: +91-11-41578085 ; Mobile No. +91-9650138282.

DOSAGE AND ADMINISTRATION

For active immunization of infants , it is recommended that three intramuscular injections of **Easyfour®-TT** vaccine be administered with an interval of four weeks between doses, starting at 6 weeks of age.
The customary age for the first dose of primary immunization is recommended to be 6 weeks of age. Specifically, Indian Academy of Pediatrics (IAP) recommends DTwP and Hib to be given at 6, 10 and 14 weeks of birth. Hence, the combination of **Easyfour®-TT** can be given at 6, 10 and 14 weeks.
A booster dose of DTwP and Hib is recommended at the age of 15-18 months.
A reinforcing injection of the DTwP combination should be administered at 5 years of age (i.e. at the time of school entry)
The IAP recommends that wherever combination vaccines are available, they can be substituted for monovalent formulations in the National Immunization Schedule wherever indicated.

MODE OF ADMINISTRATION

The vaccine should be well shaken to get a uniform suspension before use. The site of injection should be prepared with a suitable antiseptic. The vaccine should be administered by intramuscular injection. The preferred injection site for infants is antero-lateral aspect of thigh.
DO NOT INJECT INTRAVENOUSLY OR SUBCUTANEOUSLY.

The peel off label on the barrel of the syringe/vial is to be pasted on the vaccinee's vaccination card for future reference.

SHELF LIFE

Shelf life is 36 months when stored at 5 ± 3°C.

STORAGE

The vaccine should be stored and transported at temperature between 5 ± 3°C until the expiry date indicated on the Pre Filled Syringe (PFS) or Vial label/pack.
DISCARD VACCINE IF FROZEN

PRESENTATION

- Single dose vial containing 0.5 ml vaccine
- Single dose Pre-filled syringe containing 0.5 ml vaccine supplied along with 25G needle of 1˝.

WITHDRAWING THE VACCINE FROM A VIAL

Shake the vial to disperse the contents thoroughly immediately before each withdrawal of vaccine.
Remove the flip of seal and a small circular portion of rubber stopper is seen.
DO' NOT REMOVE THE RUBBER STOPPER FROM THE VIAL.
Apply a **sterile** piece of cotton moistened with a suitable antiseptic to the surface of the rubber stopper and allow to dry. Draw into the sterile syringe a volume of air equal to the amount of vaccine to be withdrawn from the vial. Pierce the centre of the rubber stopper with the **sterile** needle of the syringe, invert the vial, slowly inject into it, the air contained in the syringe, and keeping the point of the needle immersed, withdraw into the syringe the required amount of vaccine. Then hold the syringe plunger steady and withdraw the needle from the vial.
Carefully insert the needle **intramuscularly** at the prepared Injection site.

PREPARATION FOR INJECTION (PFS)

Remove the prefilled syringe from the blister pack. Holding the syringe barrel, remove the Plastic rigid cap (PRTC) from the tip of syringe. The PRTC design makes the tip cap easy to open and promote aseptic technique by reducing risk of syringe tip contamination during cap removal. Attach the needle to the Luer Lok syringe.
In the unusual event of the piston rod becoming loose off, screw it clockwise in to the plunger in order to secure it.
Each prefilled syringe should be used only once.

Manufactured by:
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Panacea Biotec
Innovation in support of life

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