

HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use HIBERIX safely and effectively. See full prescribing information for HIBERIX.

HIBERIX [Haemophilus b Conjugate Vaccine (Tetanus Toxoid Conjugate)]

Solution for Intramuscular Injection

Initial U.S. Approval: 2009

RECENT MAJOR CHANGES

Dosage and Administration (2.1, 2.2) 12/2010
Warnings and Precautions, Syncope (5.3) xx/xxxx

INDICATIONS AND USAGE

HIBERIX is a vaccine indicated for active immunization as a booster dose for the prevention of invasive disease caused by *Haemophilus influenzae* type b. HIBERIX is approved for use in children 15 months through 4 years of age (prior to fifth birthday). (1)

No clinical data are available from controlled studies comparing booster immunization with HIBERIX and a US-licensed Haemophilus b Conjugate Vaccine. (1)

DOSAGE AND ADMINISTRATION

A single intramuscular injection (approximately 0.5 mL) after reconstitution. (2.2)

DOSAGE FORMS AND STRENGTHS

Solution for injection supplied as vials of lyophilized vaccine to be reconstituted with the accompanying saline diluent in prefilled syringes. A single dose, after reconstitution, is approximately 0.5 mL. (3)

CONTRAINDICATIONS

Severe allergic reaction (e.g., anaphylaxis) after a previous dose of any *H. influenzae* type b- or tetanus toxoid-containing vaccine or any component of HIBERIX. (4)

WARNINGS AND PRECAUTIONS

- If Guillain-Barré syndrome has occurred within 6 weeks of receipt of a prior vaccine containing tetanus toxoid, the decision to give HIBERIX should be based on potential benefits and risks. (5.1)
- The tip cap of the prefilled syringes may contain natural rubber latex which may cause allergic reactions in latex sensitive individuals. (5.2, 16)
- Syncope (fainting) can occur in association with administration of injectable vaccines, including HIBERIX. Procedures should be in place to avoid falling injury and to restore cerebral perfusion following syncope. (5.3)

ADVERSE REACTIONS

Common solicited adverse events ($\geq 20\%$) were pain and redness at the injection site, fever, fussiness, loss of appetite, and restlessness. (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact GlaxoSmithKline at 1-888-825-5249 or VAERS at 1-800-822-7967 or www.vaers.hhs.gov.

DRUG INTERACTIONS

Do not mix HIBERIX with any other vaccine in the same syringe or vial. (7.1)

See 17 for PATIENT COUNSELING INFORMATION.

Revised: xx/xxxx

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1 **FULL PRESCRIBING INFORMATION**

2 **1 INDICATIONS AND USAGE**

3 HIBERIX[®] is indicated for active immunization as a booster dose for the prevention of
4 invasive disease caused by *Haemophilus influenzae* type b. HIBERIX is approved for use in
5 children 15 months through 4 years of age (prior to fifth birthday).

6 HIBERIX is to be used as a booster dose in children who have received a primary series
7 with a Haemophilus b Conjugate Vaccine that is licensed for primary immunization. HIBERIX is
8 not approved for primary immunization.

9 The evaluation of effectiveness of HIBERIX as a booster dose was based on immune
10 responses in children using serological endpoints that predict protection from invasive disease
11 due to *H. influenzae* type b [see *Clinical Pharmacology (12.1)* and *Clinical Studies (14.1)*].
12 These protective antibody levels have not been evaluated in clinical trials in which a booster
13 dose of HIBERIX is compared to a booster dose of a US-licensed Haemophilus b Conjugate
14 Vaccine in children who previously received a primary series with a US-licensed Haemophilus b
15 Conjugate Vaccine [see *Clinical Studies (14.1)*].

16 **2 DOSAGE AND ADMINISTRATION**

17 **2.1 Reconstitution Instructions**

18 HIBERIX is to be reconstituted only with the accompanying saline diluent. The
19 reconstituted vaccine should be a clear and colorless solution. Parenteral drug products should be
20 inspected visually for particulate matter and discoloration prior to administration, whenever
21 solution and container permit. If either of these conditions exists, the vaccine should not be
22 administered.

23



Figure 1. Cleanse vial stopper. Attach appropriate needle to accompanying prefilled syringe of saline diluent and insert into vial.



Figure 2. Transfer entire contents of prefilled syringe into vial. With needle still inserted, vigorously shake the vial.



Figure 3. After reconstitution, withdraw entire contents of vial (approximately 0.5 mL) and administer by intramuscular injection.

24

25 After reconstitution, HIBERIX should be administered promptly or stored refrigerated
26 between 2° and 8°C and administered within 24 hours. If the vaccine is not administered
27 promptly, shake the solution vigorously again before injection.

28 **2.2 Dose and Administration**

29 HIBERIX is administered as a single dose (approximately 0.5 mL) by intramuscular
30 injection into the anterolateral aspect of the thigh or deltoid.

31 Do not administer this product intravenously, intradermally, or subcutaneously.

32 HIBERIX is to be used as a booster dose in children who have received a primary series
33 with a Haemophilus b Conjugate Vaccine that is licensed for primary immunization [*see*
34 *Indications and Usage (1)*].

35 **3 DOSAGE FORMS AND STRENGTHS**

36 HIBERIX is a solution for injection supplied as single-dose vials of lyophilized vaccine
37 to be reconstituted with the accompanying saline diluent in prefilled TIP-LOK[®] syringes. A
38 single dose, after reconstitution, is approximately 0.5 mL.

39 **4 CONTRAINDICATIONS**

40 Severe allergic reaction (e.g., anaphylaxis) after a previous dose of any *H. influenzae* type
41 b- or tetanus toxoid-containing vaccine or any component of the vaccine is a contraindication to
42 administration of HIBERIX [*see Description (11)*].

43 **5 WARNINGS AND PRECAUTIONS**

44 **5.1 Guillain-Barré Syndrome**

45 If Guillain-Barré syndrome has occurred within 6 weeks of receipt of a prior vaccine
46 containing tetanus toxoid, the decision to give any tetanus toxoid-containing vaccine, including
47 HIBERIX, should be based on careful consideration of the potential benefits and possible risks.

48 **5.2 Latex**

49 The tip caps of the prefilled syringes may contain natural rubber latex which may cause
50 allergic reactions in latex sensitive individuals [*see How Supplied/Storage and Handling (16)*].

51 **5.3 Syncope**

52 Syncope (fainting) can occur in association with administration of injectable vaccines,
53 including HIBERIX. Syncope can be accompanied by transient neurological signs such as visual
54 disturbance, paresthesia, and tonic-clonic limb movements. Procedures should be in place to
55 avoid falling injury and to restore cerebral perfusion following syncope.

56 **5.4 Preventing and Managing Allergic Vaccine Reactions**

57 Prior to administration, the healthcare provider should review the patient's immunization
58 history for possible vaccine hypersensitivity. Epinephrine and other appropriate agents used for
59 the control of immediate allergic reactions must be immediately available should an acute
60 anaphylactic reaction occur.

61 **5.5 Altered Immunocompetence**

62 Safety and effectiveness of HIBERIX in immunosuppressed children have not been
63 evaluated. If HIBERIX is administered to immunosuppressed children, including children
64 receiving immunosuppressive therapy, the expected immune response may not be obtained.

65 **5.6 Interference With Laboratory Tests**

66 Urine antigen detection may not have a diagnostic value in suspected disease due to
67 *H. influenzae* type b within 1 to 2 weeks after receipt of a *H. influenzae* type b-containing
68 vaccine, including HIBERIX [see *Drug Interactions (7.1)*].

69 **5.7 Tetanus Immunization**

70 Immunization with HIBERIX does not substitute for routine tetanus immunization.

71 **6 ADVERSE REACTIONS**

72 **6.1 Clinical Trials Experience**

73 Because clinical trials are conducted under widely varying conditions, adverse reaction
74 rates observed in the clinical trials of a vaccine cannot be directly compared with rates in the
75 clinical trials of another vaccine, and may not reflect the rates observed in practice. There is the
76 possibility that broad use of HIBERIX could reveal adverse reactions not observed in clinical
77 trials.

78 In 7 clinical studies, 1,008 children received HIBERIX as a booster dose following
79 primary vaccination with either HIBERIX (not approved for primary series in US, N = 530),
80 Haemophilus b Conjugate Vaccine manufactured by Sanofi Pasteur SA (N = 235), Haemophilus
81 b Conjugate Vaccine manufactured by Merck & Co., Inc. (N = 26), or Haemophilus b Conjugate
82 Vaccine manufactured by Wyeth Pharmaceuticals Inc. (no longer licensed in the US, N = 217).
83 None of the studies included a comparator group that received a booster dose with a US-licensed
84 Haemophilus b Conjugate Vaccine. Studies were conducted in Europe, Canada, and Latin
85 America. Across these studies, the mean age of subjects at the time of booster vaccination with
86 HIBERIX ranged from 16 to 19 months. At the time of vaccination, 172 (17.1%) subjects were
87 11 to 14 months of age, 642 (63.7%) subjects were 15 to 18 months of age, and 194 (19.2%)
88 subjects were 19 to 25 months of age. Approximately half of the subjects were male. Among
89 subjects for whom information on race/ethnicity was available, nearly all subjects were white.

90 In these 7 studies, HIBERIX was administered concomitantly with non-US formulations
91 (containing 2.5 mg 2-phenoxyethanol per dose as preservative) of one of the following US-
92 licensed vaccines: INFANRIX[®] (Diphtheria and Tetanus Toxoids and Acellular Pertussis
93 Vaccine Adsorbed) (DTaP), KINRIX[®] (Diphtheria and Tetanus Toxoids and Acellular Pertussis
94 Adsorbed and Inactivated Poliovirus Vaccine) (DTaP-IPV), or PEDIARIX[®] [Diphtheria and
95 Tetanus Toxoids and Acellular Pertussis Adsorbed, Hepatitis B (Recombinant) and Inactivated
96 Poliovirus Vaccine] (DTaP-HBV-IPV). In the studies, DTaP-IPV and DTaP-HBV-IPV were
97 administered in dosing regimens not approved in the US. Some subjects received DTaP-HBV
98 (GlaxoSmithKline Biologicals, not licensed in US) concomitantly with HIBERIX.

99 Solicited Adverse Events: In an open-label, multicenter study conducted in Germany,
100 371 children received a booster dose of HIBERIX administered concomitantly with DTaP-HBV-
101 IPV. The mean age at the time of vaccination was 16 months. Subjects in this study had
102 previously received a primary series with either HIBERIX (not approved for primary series in
103 US, N = 92), Haemophilus b Conjugate Vaccine manufactured by Sanofi Pasteur SA (N = 96), or
104 Haemophilus b Conjugate Vaccine manufactured by Wyeth Pharmaceuticals Inc. (no longer
105 licensed in the US) (N = 183). All subjects previously received 3 doses of DTaP-HBV-IPV.
106 Information on adverse events was collected by parents/guardians using standardized forms for 4
107 consecutive days following vaccination with HIBERIX (i.e., day of vaccination and the next
108 3 days). The reported frequencies of solicited local and general adverse events are presented in
109 Table 1.
110

111 **Table 1. Percentage of Children With Solicited Local And General Adverse**
 112 **Events Within 4 Days of Vaccination^a With HIBERIX^b Coadministered With**
 113 **DTaP-HBV-IPV^c, Intent to Treat Cohort (N = 371)**

	% Any	% Grade 3
Local^d		
Redness	24.5	2.4 ^e
Pain	20.5	1.1 ^f
Swelling	14.8	2.2 ^e
General		
Fever ^g	34.8	3.8
Fussiness	25.9	0.8 ^h
Loss of appetite	22.9	0.8 ⁱ
Restlessness	21.8	0.5 ⁱ
Sleepiness	19.9	1.1 ⁱ
Diarrhea	14.6	0.8 ⁱ
Vomiting	4.9	0.5 ⁱ

114 N = all subjects for whom safety data were available.

115 ^a Within 4 days of vaccination defined as day of vaccination and the next 3 days.

116 ^b In this study, 92 subjects previously received 3 doses of HIBERIX (not approved for primary
 117 immunization in the US), 96 subjects previously received 3 doses of a US-licensed
 118 Haemophilus b Conjugate Vaccine (manufactured by Sanofi Pasteur SA), and 183 subjects
 119 previously received 3 doses of a Haemophilus b Conjugate Vaccine that is no longer licensed
 120 in the US.

121 ^c In this study, DTaP-HBV-IPV was given to subjects who previously received 3 doses of
 122 DTaP-HBV-IPV. In the US, PEDIARIX is approved for use as a 3-dose primary series; use as
 123 a fourth consecutive dose is not approved in the US.

124 ^d Local reactions at the injection site for HIBERIX.

125 ^e Grade 3 redness or swelling defined as >20 mm.

126 ^f Grade 3 pain defined as causing crying when limb moved.

127 ^g Fever defined as $\geq 100.4^{\circ}\text{F}$ ($\geq 38.0^{\circ}\text{C}$) rectally or $\geq 99.5^{\circ}\text{F}$ ($\geq 37.5^{\circ}\text{C}$) axillary, oral or tympanic;
 128 Grade 3 fever defined as $> 103.1^{\circ}\text{F}$ ($> 39.5^{\circ}\text{C}$) rectally or $> 102.2^{\circ}\text{F}$ ($> 39.0^{\circ}\text{C}$) axillary, oral or
 129 tympanic.

130 ^h Grade 3 fussiness defined as persistent crying and could not be comforted.

131 ⁱ Grade 3 for these symptoms defined as preventing normal daily activity.

132

133 Serious Adverse Events: Two of 1,008 subjects reported a serious adverse event that
 134 occurred in the 31-day period following booster immunization with HIBERIX. One subject
 135 developed bilateral pneumonia 9 days post-vaccination and one subject experienced asthenia
 136 following accidental drug ingestion 18 days post-vaccination.

137 **6.2 Postmarketing Experience**

138 In addition to reports in clinical trials, worldwide voluntary reports of adverse events
139 received for HIBERIX since market introduction (1996) of this vaccine are listed below. This list
140 includes serious events and/or events which have a plausible causal connection to HIBERIX.
141 Because these events are reported voluntarily from a population of uncertain size, it is not
142 possible to reliably estimate their frequency or establish a causal relationship to vaccination.

143 General Disorders and Administration Site Conditions: Extensive swelling of the
144 vaccinated limb, injection site induration.

145 Immune System Disorders: Allergic reactions (including anaphylactic and
146 anaphylactoid reactions), angioedema.

147 Nervous System Disorders: Convulsions (with or without fever), hypotonic-
148 hyporesponsive episode, somnolence, syncope or vasovagal responses to injection.

149 Respiratory, Thoracic, and Mediastinal Disorders: Apnea.

150 Skin and Subcutaneous Tissue Disorders: Rash, urticaria.

151 **7 DRUG INTERACTIONS**

152 **7.1 Interference With Laboratory Tests**

153 Haemophilus b capsular polysaccharide derived from Haemophilus b Conjugate Vaccines
154 has been detected in the urine of some vaccinees.¹ Urine antigen detection may not have a
155 diagnostic value in suspected disease due to *H. influenzae* type b within 1 to 2 weeks after receipt
156 of a *H. influenzae* type b-containing vaccine, including HIBERIX [see *Warnings and*
157 *Precautions (5.6)*].

158 **7.2 Concomitant Vaccine Administration**

159 In clinical studies, a booster dose of HIBERIX was administered concomitantly with 1 of
160 the following vaccines: DTaP, DTaP-IPV, DTaP-HBV-IPV, or DTaP-HBV (GlaxoSmithKline
161 Biologicals, not licensed in the US). The formulations of DTaP, DTaP-IPV, and DTaP-HBV-IPV
162 were non-US formulations (containing 2.5 mg 2-phenoxyethanol per dose as preservative) of the
163 following US-licensed vaccines: INFANRIX, KINRIX, and PEDIARIX, respectively. In these
164 studies, DTaP-IPV and DTaP-HBV-IPV were administered in dosing regimens that are not
165 approved in the US. [See *Adverse Reactions (6.1)* and *Clinical Studies (14.1)*.]

166 Sufficient data are not available to confirm lack of interference in immune responses to
167 other vaccines administered concomitantly with HIBERIX.

168 If HIBERIX is administered concomitantly with other injectable vaccines, they should be
169 given with separate syringes and at different injection sites. HIBERIX should not be mixed with
170 any other vaccine in the same syringe or vial.

171 **7.3 Immunosuppressive Therapies**

172 Immunosuppressive therapies, including irradiation, antimetabolites, alkylating agents,
173 cytotoxic drugs, and corticosteroids (used in greater than physiologic doses), may reduce the
174 immune response to HIBERIX.

175 **8 USE IN SPECIFIC POPULATIONS**

176 **8.1 Pregnancy**

177 Pregnancy Category C

178 Animal reproduction studies have not been conducted with HIBERIX. It is also not
179 known whether HIBERIX can cause fetal harm when administered to a pregnant woman or can
180 affect reproduction capacity.

181 **8.4 Pediatric Use**

182 Safety and effectiveness of HIBERIX were established in the age group 15 through 18
183 months on the basis of clinical studies [*see Adverse Reactions (6.1) and Clinical Studies (14.1)*].
184 Safety and effectiveness of HIBERIX in the age group 19 months through 4 years are supported
185 by evidence in children 15 through 18 months of age. Safety and effectiveness of HIBERIX in
186 children younger than 15 months of age and in children 5 to 16 years of age have not been
187 established.

188 **11 DESCRIPTION**

189 HIBERIX [Haemophilus b Conjugate Vaccine (Tetanus Toxoid Conjugate)] is a sterile,
190 lyophilized powder which is reconstituted at the time of use with the accompanying saline
191 diluent for intramuscular injection. HIBERIX contains Haemophilus b capsular polysaccharide
192 (polyribosyl-ribitol-phosphate [PRP]), a high molecular weight polymer prepared from the
193 *Haemophilus influenzae* type b strain 20,752 grown in a synthetic medium that undergoes heat
194 inactivation and purification. The tetanus toxin, prepared from *Clostridium tetani* grown in a
195 semi-synthetic medium, is detoxified with formaldehyde and purified. The capsular
196 polysaccharide is covalently bound to the tetanus toxoid. After purification, the conjugate is
197 lyophilized in the presence of lactose as a stabilizer. The diluent for HIBERIX is a sterile saline
198 solution (0.9% sodium chloride) supplied in prefilled TIP-LOK syringes.

199 When HIBERIX is reconstituted with the accompanying saline diluent, each dose is
200 formulated to contain 10 mcg of purified capsular polysaccharide conjugated to approximately
201 25 mcg of tetanus toxoid, 12.6 mg of lactose, and ≤0.5 mcg of residual formaldehyde.

202 HIBERIX does not contain preservatives.

203 The tip caps of the prefilled syringes may contain natural rubber latex. The rubber
204 plungers of the prefilled syringes and the vial stoppers do not contain latex. [*See How*
205 *Supplied/Storage and Handling (16).*]

206 **12 CLINICAL PHARMACOLOGY**

207 **12.1 Mechanism of Action**

208 *Haemophilus influenzae* is a gram-negative coccobacillus. Most strains of *H. influenzae*
209 that cause invasive disease are type b. *H. influenzae* type b can cause invasive disease such as
210 sepsis and meningitis.

211 Specific levels of antibodies to polyribosyl-ribitol-phosphate (anti-PRP) have been shown
212 to correlate with protection against invasive disease due to *H. influenzae* type b. Based on data
213 from passive antibody studies² and a clinical efficacy study with unconjugated *Haemophilus* b

214 polysaccharide vaccine³, an anti-PRP concentration of 0.15 mcg/mL has been accepted as a
215 minimal protective level. Data from an efficacy study with unconjugated *Haemophilus b*
216 polysaccharide vaccine indicate that an anti-PRP concentration of ≥ 1.0 mcg/mL predicts
217 protection through at least a 1-year period.^{4,5} These antibody levels have been used to evaluate
218 the effectiveness of Haemophilus b Conjugate Vaccines, including HIBERIX.

219 **13 NONCLINICAL TOXICOLOGY**

220 **13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility**

221 HIBERIX has not been evaluated for carcinogenic or mutagenic potential, or for
222 impairment of fertility.

223 **14 CLINICAL STUDIES**

224 **14.1 Immunological Evaluation**

225 In 6 clinical studies, the immune response to HIBERIX administered as a booster dose
226 was evaluated in a total of 415 children 12 to 23 months of age. At the time of vaccination, 30
227 children were 12 to 14 months of age, 316 children were 15 to 18 months of age, and 69 children
228 were 19 to 23 months of age. Among subjects, 43% to 60% were male. Among subjects for
229 whom information on race/ethnicity was available, nearly all subjects were white. None of the
230 studies included a comparator group that received a booster dose with a US-licensed
231 Haemophilus b Conjugate Vaccine. Characteristics of 3 of these studies are presented in Table 2.
232

233 **Table 2. Characteristics of 3 Open-Label Booster Immunization Studies of HIBERIX**

Study	Country	Per Protocol Immunogenicity Cohort N	Priming History	Booster Vaccination With HIBERIX	
				Age at Vaccination (months)	Concomitantly Administered Vaccine ^a
1	Canada	42	DTaP-HBV-IPV ^b + Haemophilus b Conjugate Vaccine ^c at 2, 4, and 6 months of age	16-18	DTaP-HBV-IPV ^b
2	Canada	64	DTaP-IPV ^d + HIBERIX ^e at 2, 4, and 6 months of age	16-19	DTaP-IPV ^d
3	Germany	108	DTaP-HBV ^f + HIBERIX ^e at 3, 4, and 5 months of age	16-23	DTaP-HBV ^f

234 ^a Administered at a separate site.

235 ^b Non-US formulation equivalent to PEDIARIX with the exception of containing 2.5 mg 2-
 236 phenoxyethanol per dose as preservative. In the US, PEDIARIX is approved for use as a 3-
 237 dose primary series; use as a fourth consecutive dose is not approved in the US.

238 ^c US-licensed Haemophilus b Conjugate Vaccine manufactured by Sanofi Pasteur SA.

239 ^d Non-US formulation equivalent to KINRIX with the exception of containing 2.5 mg 2-
 240 phenoxyethanol per dose as preservative. In the US, KINRIX is approved for use as the fifth
 241 dose of DTaP and the fourth dose of IPV in children 4 to 6 years of age previously primed
 242 with approved dosing regimens of INFANRIX and/or PEDIARIX. The DTaP-IPV dosing
 243 regimen is not approved in the US.

244 ^e In the US, HIBERIX is not approved for primary immunization.

245 ^f Manufactured by GlaxoSmithKline Biologicals (not licensed in the US).

246

247 Antibodies to PRP were measured in sera obtained immediately prior to and 1 month
 248 after booster vaccination with HIBERIX. Geometric mean concentrations and anti-PRP
 249 seroprotection rates are presented in Table 3.

250

251 **Table 3. Anti-PRP GMCs and Seroprotection Rates Prior to and 1 Month Following a**
 252 **Booster Dose of HIBERIX, Per Protocol Immunogenicity Cohort**

Study	N	Anti-PRP GMC (mcg/mL)		% Anti-PRP ≥0.15 mcg/mL		% Anti-PRP ≥1.0 mcg/mL	
		Pre-	Post-	Pre-	Post-	Pre-	Post-
1 ^a	42	0.46	59.07	76.2	100	35.7	97.6
2 ^b	63-64	0.25	47.78	71.4	100	12.7	100
3 ^c	108	0.59	96.12	77.8	100	32.4	100

253 GMC = geometric mean antibody concentration.

254 N = number of children for whom serological results were available for the pre- and post-dose
 255 immunological evaluations.

256 Studies 1, 2, and 3 correspond to Studies 1, 2, and 3, respectively in Table 2.

257 ^a Canadian study in children 16 to 18 months of age who previously received 3 doses of DTaP-
 258 HBV-IPV and Haemophilus b Conjugate Vaccine (manufactured by Sanofi Pasteur SA). The
 259 booster dose of HIBERIX was coadministered with DTaP-HBV-IPV (a fourth consecutive
 260 dose of PEDIARIX is not approved in the US). In this study, pre-vaccination sera may have
 261 been obtained up to 1 week prior to booster vaccination with HIBERIX.

262 ^b Canadian study in children 16 to 19 months of age who previously received 3 doses of DTaP-
 263 IPV and HIBERIX (not approved for primary immunization in the US). The booster dose of
 264 HIBERIX was coadministered with DTaP-IPV. The DTaP-IPV dosing regimen is not
 265 approved in the US.

266 ^c German study in children 16 to 23 months of age who previously received 3 doses of DTaP-
 267 HBV (GlaxoSmithKline Biologicals, not licensed in the US) and HIBERIX (not approved for
 268 primary immunization in the US). The booster dose of HIBERIX was coadministered with
 269 DTaP-HBV.

270

271 **15 REFERENCES**

272 1. Rothstein EP, Madore DV, Girone JAC, et al. Comparison of antigenuria after immunization
 273 with three *Haemophilus influenzae* type b conjugate vaccines. *Pediatr Infect Dis J*
 274 1991;10:311-314.

275 2. Robbins JB, Parke JC, Schneerson R, et al. Quantitative measurement of “natural” and
 276 immunization-induced *Haemophilus influenzae* type b capsular polysaccharide antibodies.
 277 *Pediatr Res* 1973;7:103-110.

278 3. Peltola H, Käythy H, Sivonen A, et al. *Haemophilus influenzae* type b capsular
 279 polysaccharide vaccine in children: A double-blind field study of 100,000 vaccinees
 280 3 months to 5 years of age in Finland. *Pediatrics* 1977;60:730-737.

281 4. Käythy H, Peltola H, Karanko V, et al. The protective level of serum antibodies to the
 282 capsular polysaccharide of *Haemophilus influenzae* type b. *J Infect Dis* 1983;147:1100.

283 5. Anderson P. The protective level of serum antibodies to the capsular polysaccharide of
 284 *Haemophilus influenzae* type b. *J Infect Dis* 1984;149:1034.

285 **16 HOW SUPPLIED/STORAGE AND HANDLING**

286 HIBERIX is available in single-dose vials (contains no latex) of lyophilized vaccine,
287 accompanied by disposable prefilled TIP-LOK syringes (may contain latex) (packaged without
288 needles) containing 0.7 mL of saline diluent. The tip caps of the needleless prefilled syringes
289 may contain natural rubber latex.

290 Supplied as:

291 NDC 58160-806-01 Vial of lyophilized vaccine in Package of 10: NDC 58160-806-05

292 NDC 58160-951-02 Syringe containing diluent in Package of 10: NDC 58160-951-11

293 **16.1 Storage Before Reconstitution**

294 Lyophilized vaccine vials: Store refrigerated between 2° and 8°C (36° and 46°F). Protect
295 vials from light.

296 Diluent: Store refrigerated between 2° and 8°C (36° and 46°F) or at a controlled room
297 temperature between 20° and 25°C (68° and 77°F). Do not freeze. Discard if the diluent has been
298 frozen.

299 **16.2 Storage After Reconstitution**

300 HIBERIX should be administered within 24 hours of reconstitution. After reconstitution,
301 store refrigerated between 2° and 8°C (36° and 46°F). Discard the reconstituted vaccine if not
302 used within 24 hours. Do not freeze. Discard if the vaccine has been frozen.

303 **17 PATIENT COUNSELING INFORMATION**

304 Parents or guardians should be:

- 305 • informed of the potential benefits and risks of immunization with HIBERIX.
- 306 • informed about the potential for adverse reactions that have been temporally associated with
307 administration of HIBERIX or other vaccines containing similar components.
- 308 • instructed to report any adverse events to their healthcare provider.
- 309 • given the Vaccine Information Statements, which are required by the National Childhood
310 Vaccine Injury Act of 1986 to be given prior to immunization. These materials are available
311 free of charge at the Centers for Disease Control and Prevention (CDC) website
312 (www.cdc.gov/vaccines).

313
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316



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