



## Clinical trial results:

**An open, phase IIIb, randomized, multicentric clinical trial to compare the immunogenicity, safety and reactogenicity of GlaxoSmithKline (GSK) Biologicals' DTPa-IPV vaccine versus co-administration of GSK Biologicals' DTPa vaccine and Sanofi-Pasteurs' IPV vaccine at different injection sites, to healthy children at 2, 4 and 6 months of age.**

### Summary

EudraCT number	2015-001508-71
Trial protocol	Outside EU/EEA
Global end of trial date	23 January 2007

### Results information

Result version number	v2 (current)
This version publication date	08 April 2023
First version publication date	10 July 2015
Version creation reason	<ul style="list-style-type: none"><li>• Correction of full data set</li></ul> Results have been amended to account for consistency with other registries.

### Trial information

#### Trial identification

Sponsor protocol code	104871
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#### Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	NCT00290342
WHO universal trial number (UTN)	-

Notes:

### Sponsors

Sponsor organisation name	GlaxoSmithKline Biologicals
Sponsor organisation address	Rue de l'Institut 89, Rixensart, Belgium, B-1330
Public contact	Clinical Trials Call Center, GlaxoSmithKline Biologicals, 44 2089904466, GSKClinicalSupportHD@gsk.com
Scientific contact	Clinical Trials Call Center, GlaxoSmithKline Biologicals, 44 2089904466, GSKClinicalSupportHD@gsk.com

Notes:

### Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	No
Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	Yes
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	No

Notes:

## Results analysis stage

Analysis stage	Final
Date of interim/final analysis	16 November 2007
Is this the analysis of the primary completion data?	Yes
Primary completion date	01 January 2007
Global end of trial reached?	Yes
Global end of trial date	23 January 2007
Was the trial ended prematurely?	No

Notes:

## General information about the trial

Main objective of the trial:

To demonstrate the non-inferiority of the DTPa-IPV vaccine to DTPa and IPV vaccines administered separately, in terms of antibody response against all vaccine antigens, one month after the three-dose primary vaccination course.

Protection of trial subjects:

The vaccinees were observed closely for at least 30 minutes, with appropriate medical treatment readily available in case of a rare anaphylactic reaction following the administration of vaccines.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	10 January 2006
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	No

Notes:

## Population of trial subjects

### Subjects enrolled per country

Country: Number of subjects enrolled	Korea, Republic of: 458
Worldwide total number of subjects	458
EEA total number of subjects	0

Notes:

### Subjects enrolled per age group

In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	458
Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	0
From 65 to 84 years	0
85 years and over	0

## Subject disposition

### Recruitment

Recruitment details: -

### Pre-assignment

Screening details:

Of the 458 subjects enrolled in the study, 6 subjects (5 from Infanrix-IPV Group and 1 from Infanrix + IMOVAX Polio Group) were not administered the study vaccine due to consent withdrawal from parents/guardians and received an elimination code.

### Pre-assignment period milestones

Number of subjects started	458
Number of subjects completed	452

### Pre-assignment subject non-completion reasons

Reason: Number of subjects	Consent withdrawn by subject: 6
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### Period 1

Period 1 title	Overall period (overall period)
Is this the baseline period?	Yes
Allocation method	Randomised - controlled
Blinding used	Not blinded

### Arms

Are arms mutually exclusive?	Yes
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<b>Arm title</b>	Infanrix-IPV Group
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Arm description:

Healthy male or female subjects between and including 8 to 12 weeks (56-90 days) of age at the time of the first vaccination, who were born after a gestation period of 36 to 42 weeks, received 3 doses of the GSK Biologicals' combined Infanrix-IPV (DTPa-IPV) vaccine at 2, 4 and 6 months of age, intramuscularly into the anterolateral thigh.

Arm type	Experimental
Investigational medicinal product name	Infanrix-IPV
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Injection
Routes of administration	Intramuscular use

Dosage and administration details:

Subjects received 3 doses of Infanrix-IPV at 2, 4 and 6 months of age as an intramuscular injection into the anterolateral thigh.

<b>Arm title</b>	Infanrix + IMOVAX Polio Group
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Arm description:

Healthy male or female subjects between and including 8 to 12 weeks (56-90 days) of age at the time of the first vaccination, who were born after a gestation period of 36 to 42 weeks, received 3 doses of the GSK Biologicals' Infanrix (DTPa) vaccine co-administered with Sanofi-Pasteur's IMOVAX Polio (IPV) vaccine at 2, 4 and 6 months of age, intramuscularly into the anterolateral sides of opposite thighs.

Arm type	Active comparator
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Investigational medicinal product name	Infanrix
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Injection
Routes of administration	Intramuscular use

Dosage and administration details:

Subjects received 3 doses of Infanrix co-administered with IMOVAX Polio at 2, 4 and 6 months of age as an intramuscular injection into the anterolateral sides of opposite thighs.

Investigational medicinal product name	IMOVAX Polio
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Injection
Routes of administration	Intramuscular use

Dosage and administration details:

Subjects received 3 doses of Infanrix co-administered with IMOVAX Polio at 2, 4 and 6 months of age as an intramuscular injection into the anterolateral sides of opposite thighs.

<b>Number of subjects in period 1<sup>[1]</sup></b>	Infanrix-IPV Group	Infanrix + IMOVAX Polio Group
Started	224	228
Completed	217	223
Not completed	7	5
Consent withdrawn by subject	6	4
Unspecified	-	1
Lost to follow-up	1	-

Notes:

[1] - The number of subjects reported to be in the baseline period are not the same as the worldwide number enrolled in the trial. It is expected that these numbers will be the same.

Justification: Of the 458 subjects enrolled in the study, 6 subjects (5 from Infanrix-IPV Group and 1 from Infanrix + IMOVAX Polio Group) were not administered the study vaccine due to consent withdrawal from parents/guardians and received an elimination code.

## Baseline characteristics

### Reporting groups

Reporting group title	Infanrix-IPV Group
Reporting group description:	
Healthy male or female subjects between and including 8 to 12 weeks (56-90 days) of age at the time of the first vaccination, who were born after a gestation period of 36 to 42 weeks, received 3 doses of the GSK Biologicals' combined Infanrix-IPV (DTPa-IPV) vaccine at 2, 4 and 6 months of age, intramuscularly into the anterolateral thigh.	
Reporting group title	Infanrix + IMOVAX Polio Group
Reporting group description:	
Healthy male or female subjects between and including 8 to 12 weeks (56-90 days) of age at the time of the first vaccination, who were born after a gestation period of 36 to 42 weeks, received 3 doses of the GSK Biologicals' Infanrix (DTPa) vaccine co-administered with Sanofi-Pasteur's IMOVAX Polio (IPV) vaccine at 2, 4 and 6 months of age, intramuscularly into the anterolateral sides of opposite thighs.	

Reporting group values	Infanrix-IPV Group	Infanrix + IMOVAX Polio Group	Total
Number of subjects	224	228	452
Age categorical			
Units: Subjects			
In utero			0
Preterm newborn infants (gestational age < 37 wks)			0
Newborns (0-27 days)			0
Infants and toddlers (28 days-23 months)			0
Children (2-11 years)			0
Adolescents (12-17 years)			0
Adults (18-64 years)			0
From 65-84 years			0
85 years and over			0
Age continuous			
Units: weeks			
arithmetic mean	8.8	8.8	
standard deviation	± 0.9	± 0.91	-
Gender categorical			
Units: Subjects			
Female	112	110	222
Male	112	118	230

## End points

### End points reporting groups

Reporting group title	Infanrix-IPV Group
Reporting group description: Healthy male or female subjects between and including 8 to 12 weeks (56-90 days) of age at the time of the first vaccination, who were born after a gestation period of 36 to 42 weeks, received 3 doses of the GSK Biologicals' combined Infanrix-IPV (DTPa-IPV) vaccine at 2, 4 and 6 months of age, intramuscularly into the anterolateral thigh.	
Reporting group title	Infanrix + IMOVAX Polio Group
Reporting group description: Healthy male or female subjects between and including 8 to 12 weeks (56-90 days) of age at the time of the first vaccination, who were born after a gestation period of 36 to 42 weeks, received 3 doses of the GSK Biologicals' Infanrix (DTPa) vaccine co-administered with Sanofi-Pasteur's IMOVAX Polio (IPV) vaccine at 2, 4 and 6 months of age, intramuscularly into the anterolateral sides of opposite thighs.	

### Primary: Number of Seroprotected Subjects Against Diphtheria (Anti-D) and Tetanus (Anti-T)

End point title	Number of Seroprotected Subjects Against Diphtheria (Anti-D) and Tetanus (Anti-T)
End point description: A seroprotected subject was defined as a vaccinated subject with anti-diphtheria (anti-D) and anti-tetanus (anti-T) antibody concentrations greater than or equal to ( $\geq$ ) the cut-off value of 0.1 international units/milliliter (IU/mL).	
End point type	Primary
End point timeframe: One month (Month 5) post-primary vaccination course	

End point values	Infanrix-IPV Group	Infanrix + IMOVAX Polio Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	204	211		
Units: Subjects				
Anti-D $\geq$ 0.1 IU/mL (N=204; 211)	204	211		
Anti-T $\geq$ 0.1 IU/mL (N=204; 211)	204	211		

### Statistical analyses

Statistical analysis title	Non-inferiority in terms of vaccine response to D
Comparison groups	Infanrix + IMOVAX Polio Group v Infanrix-IPV Group

Number of subjects included in analysis	415
Analysis specification	Pre-specified
Analysis type	non-inferiority <sup>[1]</sup>
Parameter estimate	Difference in seroprotection rate
Point estimate	0
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.85
upper limit	1.79

Notes:

[1] - To assess the Non-inferiority of the Infanrix-IPV Group compared to the Infanrix + IMOVAX Polio Group in terms of vaccine response to diphtheria, standardized asymptotic 95% CI for the groups' difference (Infanrix-IPV Group minus Infanrix + IMOVAX Polio Group) was computed. Objective of non-inferiority was met since the LL of the 95% CI was above -10%.

<b>Statistical analysis title</b>	Non-inferiority in terms of vaccine response to T
Comparison groups	Infanrix-IPV Group v Infanrix + IMOVAX Polio Group
Number of subjects included in analysis	415
Analysis specification	Pre-specified
Analysis type	non-inferiority <sup>[2]</sup>
Parameter estimate	Difference in seroprotection rate
Point estimate	0
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.85
upper limit	1.79

Notes:

[2] - To assess the Non-inferiority of the Infanrix-IPV Group compared to the Infanrix + IMOVAX Polio Group in terms of vaccine response to tetanus, standardized asymptotic 95% CI for the groups' difference (Infanrix-IPV Group minus Infanrix + IMOVAX Polio Group) was computed. Objective of non-inferiority was met since the LL of the 95% CI was above -10%.

### **Primary: Number of Seroprotected Subjects Against Poliovirus (Anti-polio) Types 1, 2 and 3**

End point title	Number of Seroprotected Subjects Against Poliovirus (Anti-polio) Types 1, 2 and 3
End point description:	
A seroprotected subject was defined as a vaccinated subject with anti-poliovirus types 1, 2 and 3 (Anti-Polio 1, 2 and 3) antibody titers greater than or equal to ( $\geq$ ) the cut-off value of 8.	
End point type	Primary
End point timeframe:	
One month (Month 5) post-primary vaccination course	

End point values	Infanrix-IPV Group	Infanrix + IMOVAX Polio Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	204	207		
Units: Subjects				
Anti-polio 1 $\geq 8$ (N=204; 207)	204	207		
Anti-polio 2 $\geq 8$ (N=204; 205)	204	204		
Anti-polio 3 $\geq 8$ (N=204; 207)	203	206		

## Statistical analyses

<b>Statistical analysis title</b>	Immune response non-inferiority - Anti-Polio 1
Comparison groups	Infanrix-IPV Group v Infanrix + IMOVAX Polio Group
Number of subjects included in analysis	411
Analysis specification	Pre-specified
Analysis type	non-inferiority <sup>[3]</sup>
Parameter estimate	Difference in seroprotection rate
Point estimate	0
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.85
upper limit	1.82

Notes:

[3] - To assess the Non-inferiority of the Infanrix-IPV Group compared to the Infanrix + IMOVAX Polio Group in terms of vaccine response to poliovirus type 1, standardized asymptotic 95% CI for the groups' difference (Infanrix-IPV Group minus Infanrix + IMOVAX Polio Group) was computed. Objective of non-inferiority was met since the LL of the 95% CI was above -10%.

<b>Statistical analysis title</b>	Immune response non-inferiority - Anti-Polio 2
Comparison groups	Infanrix-IPV Group v Infanrix + IMOVAX Polio Group
Number of subjects included in analysis	411
Analysis specification	Pre-specified
Analysis type	non-inferiority <sup>[4]</sup>
Parameter estimate	Difference in seroprotection rate
Point estimate	0.49
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.36
upper limit	2.71

Notes:

[4] - To assess the Non-inferiority of the Infanrix-IPV Group compared to the Infanrix + IMOVAX Polio Group in terms of vaccine response to poliovirus type 2, standardized asymptotic 95% CI for the groups' difference (Infanrix-IPV Group minus Infanrix + IMOVAX Polio Group) was computed. Objective of non-inferiority was met since the LL of the 95% CI was above -10%.

<b>Statistical analysis title</b>	Immune response non-inferiority - Anti-Polio 3
Comparison groups	Infanrix-IPV Group v Infanrix + IMOVAX Polio Group



Number of subjects included in analysis	411
Analysis specification	Pre-specified
Analysis type	non-inferiority <sup>[5]</sup>
Parameter estimate	Difference in seroprotection rate
Point estimate	-0.01
Confidence interval	
level	95 %
sides	2-sided
lower limit	-2.28
upper limit	2.24

Notes:

[5] - To assess the Non-inferiority of the Infanrix-IPV Group compared to the Infanrix + IMOVAX Polio Group in terms of vaccine response to poliovirus type 3, standardized asymptotic 95% CI for the groups' difference (Infanrix-IPV Group minus Infanrix + IMOVAX Polio Group) was computed. Objective of non-inferiority was met since the LL of the 95% CI was above -10%.

### Primary: Number of Subjects With a Vaccine Response for Anti-pertussis Toxoid (Anti-PT), Anti-pertactin (Anti-PRN) and Anti-filamentous Haemagglutinin (Anti-FHA)

End point title	Number of Subjects With a Vaccine Response for Anti-pertussis Toxoid (Anti-PT), Anti-pertactin (Anti-PRN) and Anti-filamentous Haemagglutinin (Anti-FHA)
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End point description:

Vaccine response was defined as: - for initially seronegative subjects, antibody concentrations  $\geq 5$  EL.U/mL one month after third vaccine dose; - for initially seropositive subjects, at least maintenance of pre-vaccination antibody concentrations one month after third vaccine dose.

End point type	Primary
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End point timeframe:

One month (Month 5) post-primary vaccination course

End point values	Infanrix-IPV Group	Infanrix + IMOVAX Polio Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	202	211		
Units: Subjects				
Anti-PT (N=200; 209)	200	206		
Anti-FHA (N=202; 211)	201	209		
Anti-PRN (N=202; 211)	202	210		

### Statistical analyses

Statistical analysis title	Immune response non-inferiority - Anti-PT
Comparison groups	Infanrix + IMOVAX Polio Group v Infanrix-IPV Group

Number of subjects included in analysis	413
Analysis specification	Pre-specified
Analysis type	non-inferiority <sup>[6]</sup>
Parameter estimate	Difference in seroprotection rate
Point estimate	1.44
Confidence interval	
level	95 %
sides	2-sided
lower limit	-0.46
upper limit	4.13

Notes:

[6] - To assess the Non-inferiority of the Infanrix-IPV Group compared to the Infanrix + IMOVAX Polio Group in terms of vaccine response to pertussis toxoid, standardized asymptotic 95% CI for the groups' difference (Infanrix-IPV Group minus Infanrix + IMOVAX Polio Group) was computed. Objective of non-inferiority was met since the LL of the 95% CI was above -10%.

<b>Statistical analysis title</b>	Immune response non-inferiority - Anti-FHA
Comparison groups	Infanrix-IPV Group v Infanrix + IMOVAX Polio Group
Number of subjects included in analysis	413
Analysis specification	Pre-specified
Analysis type	non-inferiority <sup>[7]</sup>
Parameter estimate	Difference in seroprotection rate
Point estimate	0.45
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.88
upper limit	2.95

Notes:

[7] - To assess the Non-inferiority of the Infanrix-IPV Group compared to the Infanrix + IMOVAX Polio Group in terms of vaccine response to filamentous haemagglutinin, standardized asymptotic 95% CI for the groups' difference (Infanrix-IPV Group minus Infanrix + IMOVAX Polio Group) was computed. Objective of non-inferiority was met since the LL of the 95% CI was above -10%.

<b>Statistical analysis title</b>	Immune response non-inferiority - Anti-PRN
Comparison groups	Infanrix + IMOVAX Polio Group v Infanrix-IPV Group
Number of subjects included in analysis	413
Analysis specification	Pre-specified
Analysis type	non-inferiority <sup>[8]</sup>
Parameter estimate	Difference in seroprotection rate
Point estimate	0.47
Confidence interval	
level	95 %
sides	2-sided
lower limit	-1.4
upper limit	2.64

Notes:

[8] - To assess the Non-inferiority of the Infanrix-IPV Group compared to the Infanrix + IMOVAX Polio Group in terms of vaccine response to pertactin, standardized asymptotic 95% CI for the groups' difference (Infanrix-IPV Group minus Infanrix + IMOVAX Polio Group) was computed. Objective of non-inferiority was met since the LL of the 95% CI was above -10%.

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## Primary: Number of Subjects With Vaccine Response to Pertussis Toxoid (PT),

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## Pertactin (PRN) and Filamentous Haemagglutinin (FHA) Antigens

End point title	Number of Subjects With Vaccine Response to Pertussis Toxoid (PT), Pertactin (PRN) and Filamentous Haemagglutinin (FHA) Antigens <sup>[9]</sup>
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End point description:

Vaccine response to pertussis toxoid (PT), pertactin (PRN) and filamentous haemagglutinin (FHA) was defined as the appearance of antibodies in subjects who were initially (i.e. before vaccination) seronegative (i.e. with concentrations < 5 EL.U/mL), or at least as the maintenance of pre-vaccination antibody concentrations in subjects who were initially seropositive (i.e. with concentrations ≥ 5 EL.U/mL value).

End point type	Primary
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End point timeframe:

One month (Month 5) post-primary vaccination course

Notes:

[9] - No statistical analyses have been specified for this primary end point. It is expected there is at least one statistical analysis for each primary end point.

Justification: The analysis of the primary endpoint was descriptive i.e. no statistical hypothesis test was performed.

End point values	Infanrix-IPV Group	Infanrix + IMOVAX Polio Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	202	211		
Units: Subjects				
Anti-PT (N=200; 209)	200	206		
Anti-FHA (N=202; 211)	201	209		
Anti-PRN (N=202; 211)	202	210		

## Statistical analyses

No statistical analyses for this end point

## Secondary: Number of Seroprotected Subjects Against Diphtheria (Anti-D) and Tetanus (Anti-T)

End point title	Number of Seroprotected Subjects Against Diphtheria (Anti-D) and Tetanus (Anti-T)
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End point description:

A seroprotected subject was defined as a vaccinated subject with anti-diphtheria (anti-D) and anti-tetanus (anti-T) antibody concentrations greater than or equal to (≥) the cut-off value of 1 international units/milliliter (IU//mL).

End point type	Secondary
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End point timeframe:

Before (Pre) and one month after (Post) the primary vaccination course

End point values	Infanrix-IPV Group	Infanrix + IMOVAX Polio Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	204	212		
Units: Subjects				
Anti-D, PRE, $\geq 1$ IU/mL (N=202; 212)	0	0		
Anti-D, POST, $\geq 1$ IU/mL (N=204; 211)	194	187		
Anti-T, PRE, $\geq 1$ IU/mL (N=202; 212)	1	1		
Anti-T, POST, $\geq 1$ IU/mL (N=204; 211)	204	208		

## Statistical analyses

No statistical analyses for this end point

## Secondary: Concentration of Antibodies Against Diphtheria (Anti-D) and Tetanus (Anti-T)

End point title	Concentration of Antibodies Against Diphtheria (Anti-D) and Tetanus (Anti-T)
End point description: Concentrations are presented as geometric mean concentrations (GMCs), expressed in international units per millilitre (mIU/mL).	
End point type	Secondary
End point timeframe: Before (Pre) and one month after (Post) the primary vaccination course	

End point values	Infanrix-IPV Group	Infanrix + IMOVAX Polio Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	204	212		
Units: IU/mL				
geometric mean (confidence interval 95%)				
Anti-D, PRE (N=202; 212)	0.052 (0.051 to 0.054)	0.053 (0.05 to 0.055)		
Anti-D, POST (N=204; 211)	4.333 (3.902 to 4.813)	2.63 (2.36 to 2.932)		
Anti-T, PRE (N=202; 212)	0.059 (0.055 to 0.064)	0.06 (0.056 to 0.065)		
Anti-T, POST (N=204; 211)	10.306 (9.5 to 11.18)	7.139 (6.512 to 7.826)		

## Statistical analyses

No statistical analyses for this end point

## Secondary: Titers for Poliovirus Type 1, 2 and 3 Antibodies

End point title	Titers for Poliovirus Type 1, 2 and 3 Antibodies
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End point description:

Titers for anti-polio 1, 2 and 3 are presented as geometric mean titers (GMTs). The reference seropositivity cut-off value was greater than or equal to ( $\geq$ ) 8.

End point type	Secondary
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End point timeframe:

Before (Pre) and one month after (Post) the primary vaccination course

End point values	Infanrix-IPV Group	Infanrix + IMOVAX Polio Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	204	212		
Units: Titers				
geometric mean (confidence interval 95%)				
Anti-polio 1, PRE (N=199; 212)	6.3 (5.5 to 7.1)	6.1 (5.4 to 6.9)		
Anti-polio 1, POST (N=204; 207)	755.5 (643.5 to 887.4)	263 (232.1 to 298)		
Anti-polio 2, PRE (N=202; 211)	5.8 (5.2 to 6.5)	6.5 (5.8 to 7.3)		
Anti-polio 2, POST (N=204; 205)	704.7 (599.5 to 828.4)	267.6 (233.4 to 306.8)		
Anti-polio 3, PRE (N=202; 212)	5 (4.5 to 5.4)	4.9 (4.5 to 5.3)		
Anti-polio 3, POST (N=204; 207)	1209.5 (1040.1 to 1406.5)	438.3 (383.1 to 501.3)		

## Statistical analyses

No statistical analyses for this end point

## Secondary: Concentrations of Antibodies Against Pertussis Toxoid (Anti-PT), Pertactin (Anti-PRN) and Filamentous Haemagglutinin (Anti-FHA)

End point title	Concentrations of Antibodies Against Pertussis Toxoid (Anti-PT), Pertactin (Anti-PRN) and Filamentous Haemagglutinin (Anti-FHA)
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End point description:

Concentrations are presented as geometric mean concentrations (GMCs), expressed in ELISA units per millilitre (EL.U/mL).

End point type	Secondary
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End point timeframe:

Before (Pre) and one month after (Post) the primary vaccination course

End point values	Infanrix-IPV Group	Infanrix + IMOVAX Polio Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	204	212		
Units: EL.U/mL				
geometric mean (confidence interval 95%)				
Anti-PT, PRE (N=200; 210)	3 (2.8 to 3.2)	3.2 (3 to 3.5)		
Anti-PT, POST (N=204; 211)	63.3 (58.7 to 68.2)	55.6 (50.9 to 60.7)		
Anti-FHA, PRE (N=202; 212)	7.4 (6.5 to 8.4)	8.5 (7.4 to 9.7)		
Anti-FHA, POST (N=204; 211)	294.3 (269.5 to 321.4)	259.6 (235.1 to 286.6)		
Anti-PRN, PRE (N=202; 212)	2.7 (2.5 to 2.8)	2.7 (2.6 to 2.9)		
Anti-PRN, POST (N=204; 211)	205 (187.7 to 223.9)	155.6 (140.7 to 172.1)		

### Statistical analyses

No statistical analyses for this end point

### Secondary: Number of Subjects Reporting Solicited Local Symptoms

End point title	Number of Subjects Reporting Solicited Local Symptoms
End point description:	
Assessed solicited local symptoms were pain, redness and swelling. Any = occurrence of the symptom regardless of intensity grade. Grade 3 pain = crying when limb was moved/spontaneously painful. Grade 3 redness/swelling = redness/swelling spreading beyond 20 millimeters (mm) of injection site.	
End point type	Secondary
End point timeframe:	
During the 4-day (Days 0-3) post-vaccination period, across doses	

End point values	Infanrix-IPV Group	Infanrix + IMOVAX Polio Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	220	226		
Units: Subjects				
Any Pain	92	96		
Grade 3 Pain	5	8		
Any Redness	115	116		
Grade 3 Redness	22	26		
Any Swelling	74	79		
Grade 3 Swelling	17	20		

### Statistical analyses

No statistical analyses for this end point

### Secondary: Number of Subjects Reporting Solicited General Symptoms

End point title	Number of Subjects Reporting Solicited General Symptoms
End point description: Assessed solicited general symptoms were drowsiness, fever [defined as axillary temperature equal to or above 37.5 degrees Celsius (°C)], irritability and loss of appetite. Any = occurrence of the symptom regardless of intensity grade. Grade 3 drowsiness = drowsiness that prevented normal activity. Grade 3 fever = fever > 39.0 °C. Grade 3 irritability = crying that could not be comforted/ prevented normal activity. Grade 3 Loss of appetite = not eating at all. Related = symptom symptoms considered by the investigator to have a causal relationship to vaccination.	
End point type	Secondary
End point timeframe: During the 4-day (Days 0-3) post-vaccination period, across doses	

End point values	Infanrix-IPV Group	Infanrix + IMOVAX Polio Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	221	226		
Units: Subjects				
Any Drowsiness	95	99		
Grade 3 Drowsiness	4	2		
Related Drowsiness	54	53		
Any Fever (axillary)	63	38		
Grade 3 Fever (axillary)	4	1		
Related Fever (axillary)	45	22		
Any Irritability	140	139		
Grade 3 Irritability	14	10		
Related Irritability	85	91		
Any Loss of appetite	84	78		
Grade 3 Loss of appetite	1	0		
Related Loss of appetite	50	46		

### Statistical analyses

No statistical analyses for this end point

### Secondary: Number of Subjects Reporting Any Unsolicited Adverse Events (AEs)

End point title	Number of Subjects Reporting Any Unsolicited Adverse Events (AEs)
End point description: An unsolicited AE covers any untoward medical occurrence in a clinical investigation subject temporally associated with the use of a medicinal product, whether or not considered related to the medicinal product and reported in addition to those solicited during the clinical study and any solicited symptom with onset outside the specified period of follow-up for solicited symptoms. Any was defined as the occurrence of any unsolicited AE regardless of intensity grade or relation to vaccination.	
End point type	Secondary

End point timeframe:

During the 31-day (Days 0-30) post-vaccination period

End point values	Infanrix-IPV Group	Infanrix + IMOVAX Polio Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	224	228		
Units: Subjects				
Any AE(s)	135	138		

### Statistical analyses

No statistical analyses for this end point

### Secondary: Number of Subjects Reporting Any Serious Adverse Events (SAEs)

End point title	Number of Subjects Reporting Any Serious Adverse Events (SAEs)
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End point description:

Serious adverse events (SAEs) assessed include medical occurrences that result in death, are life threatening, require hospitalization or prolongation of hospitalization or result in disability/incapacity.

End point type	Secondary
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End point timeframe:

During the entire study period (from Month 0 up to Month 5)

End point values	Infanrix-IPV Group	Infanrix + IMOVAX Polio Group		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	224	228		
Units: Subjects				
Any SAE(s)	15	17		

### Statistical analyses

No statistical analyses for this end point



## Adverse events

### Adverse events information

Timeframe for reporting adverse events:

Solicited local and general symptoms during the 4-day (Days 0-3) post-vaccination period; Unsolicited AEs during the 31-day (Days 0-30) post-vaccination period and SAEs during the entire study period (from Month 0 up to Month 5)

Assessment type	Systematic
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### Dictionary used

Dictionary name	MedDRA
Dictionary version	10.1

### Reporting groups

Reporting group title	Infanrix-IPV Group
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Reporting group description:

Healthy male or female subjects between and including 8 to 12 weeks (56-90 days) of age at the time of the first vaccination, who were born after a gestation period of 36 to 42 weeks, received 3 doses of the GSK Biologicals' combined Infanrix-IPV (DTPa-IPV) vaccine at 2, 4 and 6 months of age, intramuscularly into the anterolateral thigh.

Reporting group title	Infanrix + IMOVAX Polio Group
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Reporting group description:

Healthy male or female subjects between and including 8 to 12 weeks (56-90 days) of age at the time of the first vaccination, who were born after a gestation period of 36 to 42 weeks, received 3 doses of the GSK Biologicals' Infanrix (DTPa) vaccine co-administered with Sanofi-Pasteur's IMOVAX Polio (IPV) vaccine at 2, 4 and 6 months of age, intramuscularly into the anterolateral sides of opposite thighs.

Serious adverse events	Infanrix-IPV Group	Infanrix + IMOVAX Polio Group	
Total subjects affected by serious adverse events			
subjects affected / exposed	15 / 224 (6.70%)	17 / 228 (7.46%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events			
Congenital, familial and genetic disorders			
Patent ductus arteriosus			
subjects affected / exposed	0 / 224 (0.00%)	1 / 228 (0.44%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Nervous system disorders			
Febrile convulsion			
subjects affected / exposed	1 / 224 (0.45%)	0 / 228 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
General disorders and administration site conditions			

Pyrexia			
subjects affected / exposed	2 / 224 (0.89%)	1 / 228 (0.44%)	
occurrences causally related to treatment / all	2 / 2	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastrointestinal disorders			
Inguinal hernia			
subjects affected / exposed	0 / 224 (0.00%)	2 / 228 (0.88%)	
occurrences causally related to treatment / all	0 / 0	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Hepatobiliary disorders			
Hepatic function abnormal			
subjects affected / exposed	1 / 224 (0.45%)	0 / 228 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Infections and infestations			
Bronchiolitis			
subjects affected / exposed	7 / 224 (3.13%)	3 / 228 (1.32%)	
occurrences causally related to treatment / all	0 / 7	0 / 3	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pneumonia			
subjects affected / exposed	4 / 224 (1.79%)	5 / 228 (2.19%)	
occurrences causally related to treatment / all	0 / 4	0 / 5	
deaths causally related to treatment / all	0 / 0	0 / 0	
Urinary tract infection			
subjects affected / exposed	3 / 224 (1.34%)	5 / 228 (2.19%)	
occurrences causally related to treatment / all	0 / 3	0 / 5	
deaths causally related to treatment / all	0 / 0	0 / 0	
Gastroenteritis			
subjects affected / exposed	2 / 224 (0.89%)	2 / 228 (0.88%)	
occurrences causally related to treatment / all	0 / 2	0 / 2	
deaths causally related to treatment / all	0 / 0	0 / 0	
Kawasaki's disease			

subjects affected / exposed	0 / 224 (0.00%)	1 / 228 (0.44%)	
occurrences causally related to treatment / all	0 / 0	0 / 1	
deaths causally related to treatment / all	0 / 0	0 / 0	
Otitis media acute			
subjects affected / exposed	1 / 224 (0.45%)	0 / 228 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Pyelonephritis acute			
subjects affected / exposed	1 / 224 (0.45%)	0 / 228 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	
Sepsis			
subjects affected / exposed	1 / 224 (0.45%)	0 / 228 (0.00%)	
occurrences causally related to treatment / all	0 / 1	0 / 0	
deaths causally related to treatment / all	0 / 0	0 / 0	

Frequency threshold for reporting non-serious adverse events: 5 %

<b>Non-serious adverse events</b>	Infanrix-IPV Group	Infanrix + IMOVAX Polio Group	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	200 / 224 (89.29%)	196 / 228 (85.96%)	
Nervous system disorders			
Somnolence			
subjects affected / exposed	95 / 224 (42.41%)	99 / 228 (43.42%)	
occurrences (all)	152	161	
General disorders and administration site conditions			
Pain			
subjects affected / exposed	92 / 224 (41.07%)	96 / 228 (42.11%)	
occurrences (all)	164	161	
Swelling			
subjects affected / exposed	74 / 224 (33.04%)	79 / 228 (34.65%)	
occurrences (all)	114	129	
Pyrexia			

subjects affected / exposed occurrences (all)	74 / 224 (33.04%) 91	40 / 228 (17.54%) 48	
Gastrointestinal disorders Diarrhoea subjects affected / exposed occurrences (all)	12 / 224 (5.36%) 16	8 / 228 (3.51%) 8	
Skin and subcutaneous tissue disorders Erythema subjects affected / exposed occurrences (all)  Dermatitis atopic subjects affected / exposed occurrences (all)	115 / 224 (51.34%) 212  16 / 224 (7.14%) 18	116 / 228 (50.88%) 209  17 / 228 (7.46%) 20	
Psychiatric disorders Irritability subjects affected / exposed occurrences (all)	140 / 224 (62.50%) 238	139 / 228 (60.96%) 241	
Infections and infestations Upper respiratory tract infection subjects affected / exposed occurrences (all)  Gastroenteritis subjects affected / exposed occurrences (all)  Bronchiolitis subjects affected / exposed occurrences (all)  Bronchitis subjects affected / exposed occurrences (all)	72 / 224 (32.14%) 98  10 / 224 (4.46%) 11  14 / 224 (6.25%) 14  7 / 224 (3.13%) 8	61 / 228 (26.75%) 88  13 / 228 (5.70%) 14  7 / 228 (3.07%) 11  12 / 228 (5.26%) 12	
Metabolism and nutrition disorders Decreased appetite subjects affected / exposed occurrences (all)	84 / 224 (37.50%) 130	78 / 228 (34.21%) 115	

## More information

### Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? Yes

Date	Amendment
27 October 2005	<p>This amendment was written to reflect the changes in study design following discussions with KFDA, ad to clarify some study aspects. Major changes in study design being:</p> <ul style="list-style-type: none"><li>- Usage of IMOVAX Polio instead of IPOL in the study. Both vaccines are manufactured by Sanofi-Pasteur and both have the same content. IMOVAX Polio will be used instead of IPOL in order to source the vaccine supply directly from Belgium instead of the United States.</li><li>- Perform Hib vaccine administration out of the study context.</li><li>- Inclusion of vaccine response to pertussis antigens as a primary endpoint and recalculation of sample size accordingly.</li></ul>

Notes:

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### Interruptions (globally)

Were there any global interruptions to the trial? No

### Limitations and caveats

None reported