

HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use Influenza A (H1N1) 2009 Monovalent Vaccine safely and effectively. See full prescribing information for Influenza A (H1N1) 2009 Monovalent Vaccine.

Influenza A (H1N1) 2009 Monovalent Vaccine
Manufactured by CSL Limited
Suspension for Intramuscular Injection
Initial U.S. Approval: 2007

INDICATIONS AND USAGE

- Influenza A (H1N1) 2009 Monovalent Vaccine is an inactivated influenza virus vaccine indicated for active immunization of persons ages 18 years of age and older against influenza disease caused by pandemic (H1N1) 2009 virus. (1)
- This indication is based on the immune response elicited by the seasonal trivalent Influenza Virus Vaccine manufactured by CSL (AFLURIA). CSL's Influenza A (H1N1) 2009 Monovalent Vaccine and AFLURIA are manufactured by the same process. There have been no controlled clinical studies demonstrating a decrease in influenza disease after vaccination with AFLURIA. (14)

DOSAGE AND ADMINISTRATION

Based on currently available information, the vaccination regimen is as follows:

Adults 18 years of age and older:

A single 0.5 mL intramuscular injection. (2)

DOSAGE FORMS AND STRENGTHS

Influenza A (H1N1) 2009 Monovalent Vaccine, a sterile suspension for intramuscular injection, is supplied in two presentations:

- 0.5 mL preservative-free, single-dose, pre-filled syringe. (3, 11)
- 5 mL multi-dose vial containing ten doses. Thimerosal, a mercury derivative, is added as a preservative; each 0.5 mL dose contains 24.5 micrograms (mcg) of mercury. (3, 11)

CONTRAINDICATIONS

- Hypersensitivity to eggs or chicken protein, neomycin, or polymyxin, or life-threatening reaction to previous influenza vaccination. (4, 11)

WARNINGS AND PRECAUTIONS

- If Guillain-Barré Syndrome (GBS) has occurred within 6 weeks of previous influenza vaccination, the decision to give Influenza A (H1N1) 2009 Monovalent Vaccine should be based on careful consideration of the potential benefits and risks. (5.1)
- Immunocompromised persons may have a diminished immune response to Influenza A (H1N1) 2009 Monovalent Vaccine. (5.2)

ADVERSE REACTIONS

Adverse reactions information is based on studies conducted with seasonal trivalent Influenza Virus Vaccine manufactured by CSL (AFLURIA).

The most common (≥ 10%) local (injection-site) adverse reactions were tenderness, pain, redness, and swelling. The most common (≥ 10%) systemic adverse reactions were headache, malaise, and muscle aches. (6.1)

To report SUSPECTED ADVERSE REACTIONS, contact CSL Biotherapies at 1-888-435-8633 or VAERS at 1-800-822-7967 and www.vaers.hhs.gov.

DRUG INTERACTIONS

- Do not mix with any other vaccine in the same syringe or vial. (7.1)
- Immunosuppressive therapies may diminish the immune response to Influenza A (H1N1) 2009 Monovalent Vaccine. (7.2)

USE IN SPECIFIC POPULATIONS

Information is based on studies conducted with seasonal trivalent Influenza Virus Vaccine manufactured by CSL (AFLURIA).

- Safety and effectiveness of Influenza A (H1N1) 2009 Monovalent Vaccine have not been established in pregnant women, nursing mothers or in persons less than 18 years of age. (8.1, 8.3, 8.4)
- Antibody responses to the seasonal trivalent Influenza Virus Vaccine (AFLURIA) were lower in geriatric subjects than in younger subjects. (8.5)

See 17 for PATIENT COUNSELING INFORMATION.

Revised: 09/2009

FULL PRESCRIBING INFORMATION: CONTENTS*

1 INDICATIONS AND USAGE
2 DOSAGE AND ADMINISTRATION
 2.1 Prior to Administration
 2.2 Administration
3 DOSAGE FORMS AND STRENGTHS
4 CONTRAINDICATIONS
5 WARNINGS AND PRECAUTIONS
 5.1 Guillain-Barré Syndrome (GBS)
 5.2 Altered Immunocompetence
 5.3 Preventing and Managing Allergic Reactions
 5.4 Limitations of Vaccine Effectiveness
6 ADVERSE REACTIONS
 6.1 Overall Adverse Reactions
 6.2 Safety Experience from Clinical Studies
 6.3 Postmarketing Experience
 6.4 Other Adverse Reactions Associated With Influenza Vaccination
7 DRUG INTERACTIONS
 7.1 Concurrent Use With Other Vaccines
 7.2 Concurrent Use With Immunosuppressive Therapies
8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy
 8.3 Nursing Mothers
 8.4 Pediatric Use
 8.5 Geriatric Use
11 DESCRIPTION
12 CLINICAL PHARMACOLOGY
 12.1 Mechanism of Action
13 NONCLINICAL TOXICOLOGY
 13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility
14 CLINICAL STUDIES
15 REFERENCES
16 HOW SUPPLIED/STORAGE AND HANDLING
17 PATIENT COUNSELING INFORMATION

*Sections or subsections omitted from the full prescribing information are not listed.

Package insert

1 FULL PRESCRIBING INFORMATION**1 INDICATIONS AND USAGE**

Influenza A (H1N1) 2009 Monovalent Vaccine is an inactivated influenza virus vaccine indicated for active immunization of persons ages 18 years of age and older against influenza disease caused by pandemic (H1N1) 2009 virus.

This indication is based on the immune response elicited by the seasonal trivalent Influenza Virus Vaccine manufactured by CSL (AFLURIA®). CSL's Influenza A (H1N1) 2009 Monovalent Vaccine and AFLURIA are manufactured by the same process. There have been no controlled clinical studies demonstrating a decrease in influenza disease after vaccination with AFLURIA (*see Clinical Studies [14]*).

2 DOSAGE AND ADMINISTRATION**2.1 Prior to Administration**

Influenza A (H1N1) 2009 Monovalent Vaccine syringes and vials should be inspected visually for particulate matter and discoloration prior to administration (*see Description [11]*), whenever suspension and container permit. If either of these conditions exists, the vaccine should not be administered. Any vaccine that has been frozen or is suspected of being frozen must not be used.

2.2 Administration

When using the preservative-free, single-dose syringe, shake the syringe thoroughly and administer the dose immediately.

When using the multi-dose vial, shake the vial thoroughly before withdrawing each dose, and administer the dose immediately. Between uses, store the vial at 2–8°C (36–46°F) (*see How Supplied/Storage and Handling [16]*).

Once the stopper has been pierced, the vial must be discarded within 28 days.

Clinical studies are ongoing with Influenza A (H1N1) 2009 Monovalent Vaccine to determine the optimal dosage, number of doses and schedule.

Adults 18 years of age and older should receive a single 0.5 mL intramuscular dose.

The preferred site for intramuscular injection is the deltoid muscle of the upper arm.

Package insert

3 DOSAGE FORMS AND STRENGTHS

Influenza A (H1N1) 2009 Monovalent Vaccine is a sterile suspension for intramuscular injection (see *Description [11]*).

Influenza A (H1N1) 2009 Monovalent Vaccine is supplied in two presentations:

- 0.5 mL preservative-free, single-dose, pre-filled syringe.
- 5 mL multi-dose vial containing ten doses. Thimerosal, a mercury derivative, is added as a preservative; each 0.5 mL dose contains 24.5 mcg of mercury.

4 CONTRAINDICATIONS

Influenza A (H1N1) 2009 Monovalent Vaccine is contraindicated in individuals with known hypersensitivity to eggs or chicken protein, neomycin, or polymyxin, or in anyone who has had a life-threatening reaction to previous influenza vaccination.

5 WARNINGS AND PRECAUTIONS**5.1 Guillain-Barré Syndrome (GBS)**

If GBS has occurred within 6 weeks of previous influenza vaccination, the decision to give Influenza A (H1N1) 2009 Monovalent Vaccine should be based on careful consideration of the potential benefits and risks.

5.2 Altered Immunocompetence

If Influenza A (H1N1) 2009 Monovalent Vaccine is administered to immunocompromised persons, including those receiving immunosuppressive therapy, the immune response may be diminished.

5.3 Preventing and Managing Allergic Reactions

Appropriate medical treatment and supervision must be available to manage possible anaphylactic reactions following administration of the vaccine.

5.4 Limitations of Vaccine Effectiveness

Vaccination with Influenza A (H1N1) 2009 Monovalent Vaccine may not protect all individuals.

6 ADVERSE REACTIONS

CSL's Influenza A (H1N1) 2009 Monovalent Vaccine and seasonal trivalent Influenza Virus Vaccine (AFLURIA) are manufactured by the same process. The following sections summarize data obtained from clinical studies and postmarketing experience with AFLURIA.

6.1 Overall Adverse Reactions

Serious allergic reactions, including anaphylactic shock, have been observed during postmarketing surveillance in individuals receiving AFLURIA.

The most common local (injection-site) adverse reactions observed in clinical studies with AFLURIA were tenderness, pain, redness, and swelling. The most common systemic adverse reactions observed were headache, malaise, and muscle aches.

6.2 Safety Experience from Clinical Studies

Because clinical studies are conducted under widely varying conditions, adverse reaction rates observed in the clinical studies of a vaccine cannot be directly compared to rates in the clinical studies of another vaccine and may not reflect the rates observed in clinical practice.

Clinical safety data for AFLURIA have been obtained in two clinical studies (*see Clinical Studies [14]*).

A US study (Study 1) included 1,357 subjects for safety analysis, ages 18 to less than 65 years, randomized to receive AFLURIA (1,089 subjects) or placebo (268 subjects). There were no deaths or serious adverse events reported in this study.

A UK study (Study 2) included 275 subjects, ages 65 years and older, randomized to receive preservative-free AFLURIA (206 subjects) or a European-licensed trivalent inactivated influenza vaccine as an active control (69 subjects). There were no deaths or serious adverse events reported in this study.

The safety assessment was identical for the two studies. Local (injection-site) and systemic adverse events were solicited by completion of a symptom diary card for 5 days post-vaccination (Table 1). Unsolicited local and systemic adverse events were collected for 21 days post-vaccination (Table 2). These unsolicited adverse events were reported either spontaneously or when subjects were questioned about any changes in their health post-vaccination. All adverse events are presented regardless of any treatment causality assigned by study investigators.

Package insert

122 **Table 1: Proportion of Subjects With Solicited Local or Systemic Adverse Events* Within**
 123 **5 Days After Administration of AFLURIA or Placebo, Irrespective of Causality†**
 124

Solicited Adverse event	Study 1 Subjects ≥ 18 to < 65 years		Study 2 Subjects ≥ 65 years
	AFLURIA‡ n=1089	Placebo§ n=268	AFLURIA n=206
Local			
Tenderness¶	60%	18%	34%
Pain¶	40%	9%	9%
Redness	16%	8%	23%
Swelling	9%	1%	11%
Bruising	5%	1%	4%
Systemic			
Headache	26%	26%	15%
Malaise	20%	19%	10%
Muscle aches	13%	9%	14%
Nausea	6%	9%	3%
Chills/ Shivering	3%	2%	7%
Fever ≥ 37.7°C (99.86°F)	1%	1%	1%
Vomiting	1%	1%	0%

125 * In Study 1, 87% of solicited local and systemic adverse events were mild, 12% were moderate, and 1% were severe. In
 126 Study 2, 76.5% were mild, 20.5% were moderate, and 3% were severe. In both studies, most solicited local and systemic
 127 adverse events lasted no longer than 2 days.
 128 † Values rounded to the nearest whole percent.
 129 ‡ Includes subjects who received either the single-dose (preservative-free) or multi-dose formulation of AFLURIA.
 130 § Thimerosal-containing placebo.
 131 ¶ Tenderness defined as pain on touching.
 132 ¶ Pain defined as spontaneously painful without touch.
 133

Package insert

134 **Table 2: Adverse Events* Reported Spontaneously by ≥ 1% of Subjects Within 21 Days**
 135 **After Administration of AFLURIA or Placebo, Irrespective of Causality†**
 136

Adverse Event	Study 1 Subjects ≥ 18 to < 65 years		Study 2 Subjects ≥ 65 years
	AFLURIA‡ n=1089	Placebo§ n=268	AFLURIA n=206
Headache	8%	6%	8%
Nasal Congestion	1%	1%	7%
Cough	1%	0.4%	5%
Rhinorrhea	1%	1%	5%
Pharyngolaryngeal Pain	3%	1%	5%
Reactogenicity Event	3%	3%	0%
Diarrhea	2%	3%	1%
Back Pain	2%	0.4%	2%
Upper Respiratory Tract Infection	2%	1%	0.5%
Viral Infection	0.4%	1%	0%
Lower Respiratory Tract Infection	0%	0%	1%
Myalgia	1%	1%	1%
Muscle Spasms	0.4%	1%	0%

137 * In Study 1, 63% of unsolicited adverse events were mild, 35% were moderate, and 2% were severe. In Study 2, 47% were
 138 mild, 51% were moderate, and 3% were severe. In both studies, most unsolicited adverse events lasted no longer than 5 days.
 139 † Values greater than 0.5% rounded to the nearest whole percent.
 140 ‡ Includes subjects who received either the single-dose (preservative-free) or multi-dose formulation of AFLURIA.
 141 § Thimerosal-containing placebo.
 142

143 **6.3 Postmarketing Experience**

144 Because postmarketing reporting of adverse reactions is voluntary and from a population of
 145 uncertain size, it is not always possible to reliably estimate their frequency or establish a causal
 146 relationship to vaccine exposure. The adverse reactions described have been included in this
 147 section because they: 1) represent reactions that are known to occur following immunizations
 148 generally or influenza immunizations specifically; 2) are potentially serious; or 3) have been
 149 reported frequently. The following adverse reactions also include those identified during
 150 postapproval use of AFLURIA outside the US since 1985.
 151

152 **Blood and lymphatic system disorders**

153 Transient thrombocytopenia

154 **Immune system disorders**

155 Allergic reactions including anaphylactic shock and serum sickness
 156
 157

Package insert

158 Nervous system disorders

159 Neuralgia, paresthesia, and convulsions; encephalopathy, neuritis or neuropathy, transverse
160 myelitis, and GBS

161

162 Vascular disorders

163 Vasculitis with transient renal involvement

164

165 Skin and subcutaneous tissue disorders

166 Pruritus, urticaria, and rash

167

168 General disorders and administration site conditions

169 Influenza-like illness (e.g., pyrexia, chills, headache, malaise, myalgia), injection-site
170 inflammation (e.g., pain, erythema, swelling, warmth), and induration

171

172 6.4 Other Adverse Reactions Associated With Influenza Vaccination

173 Anaphylaxis has been reported after administration of AFLURIA. Although AFLURIA and
174 Influenza A (H1N1) 2009 Monovalent Vaccine contain only a limited quantity of egg protein,
175 this protein can induce immediate hypersensitivity reactions among persons who have severe
176 egg allergy. Allergic reactions include hives, angioedema, allergic asthma, and systemic
177 anaphylaxis (*see [Contraindications \[4\]](#)*).

178

179 The 1976 swine influenza vaccine was associated with an increased frequency of Guillain-Barré
180 Syndrome (GBS). Evidence for a causal relation of GBS with subsequent vaccines prepared
181 from other influenza viruses is unclear. If influenza vaccine does pose a risk, it is probably
182 slightly more than one additional case per 1 million persons vaccinated.

183

184 Neurological disorders temporally associated with influenza vaccination, such as
185 encephalopathy, optic neuritis/neuropathy, partial facial paralysis, and brachial plexus
186 neuropathy, have been reported.

187

188 Microscopic polyangiitis (vasculitis) has been reported temporally associated with influenza
189 vaccination.

190

191

192 7 DRUG INTERACTIONS

193

194 7.1 Concurrent Use With Other Vaccines

195 There are no data to assess the concomitant administration of Influenza A (H1N1) 2009
196 Monovalent Vaccine with other vaccines.

197

198 If Influenza A (H1N1) 2009 Monovalent Vaccine is to be given at the same time as another
199 injectable vaccine(s), the vaccine(s) should be administered at different injection sites.

200

Package insert

201 Influenza A (H1N1) 2009 Monovalent Vaccine should not be mixed with any other vaccine in
202 the same syringe or vial.

203

204 7.2 Concurrent Use With Immunosuppressive Therapies

205 The immunological response to Influenza A (H1N1) 2009 Monovalent Vaccine may be
206 diminished in individuals receiving corticosteroid or immunosuppressive therapies.

207

208

209 8 USE IN SPECIFIC POPULATIONS

210 CSL's Influenza A (H1N1) 2009 Monovalent Vaccine and seasonal trivalent Influenza Virus
211 Vaccine (AFLURIA) are manufactured by the same process. Available information for
212 AFLURIA is provided in this section.

213

214 8.1 Pregnancy

215 Pregnancy Category C: Animal reproduction studies have not been conducted with Influenza A
216 (H1N1) 2009 Monovalent Vaccine or AFLURIA. It is also not known whether these vaccines
217 can cause fetal harm when administered to a pregnant woman or can affect reproduction
218 capacity. Influenza A (H1N1) 2009 Monovalent Vaccine should be given to a pregnant woman
219 only if clearly needed.

220

221 8.3 Nursing Mothers

222 Neither Influenza A (H1N1) 2009 Monovalent Vaccine nor AFLURIA has been evaluated in
223 nursing mothers. It is not known whether Influenza A (H1N1) 2009 Monovalent Vaccine or
224 AFLURIA is excreted in human milk. Because many drugs are excreted in human milk,
225 caution should be exercised when Influenza A (H1N1) 2009 Monovalent Vaccine is
226 administered to a nursing woman.

227

228 8.4 Pediatric Use

229 Neither Influenza A (H1N1) 2009 Monovalent Vaccine nor AFLURIA has been evaluated in
230 children. Safety and effectiveness in the pediatric population have not been established.

231

232 8.5 Geriatric Use

233 In four clinical studies, 343 subjects ages 65 years and older received AFLURIA.
234 Hemagglutination-inhibiting (HI) antibody responses in geriatric subjects were lower after
235 administration of AFLURIA in comparison to younger adult subjects (*see Clinical Studies*
236 *[14]*).

237

238 Adverse event rates were generally similar in frequency to those reported in subjects ages 18 to
239 less than 65 years, although some differences were observed (*see Adverse Reactions [6.2]*).

240

241

Package insert

11 DESCRIPTION

Influenza A (H1N1) 2009 Monovalent Vaccine, for intramuscular injection, is a sterile, clear, colorless to slightly opalescent suspension with some sediment that resuspends upon shaking to form a homogeneous suspension. Influenza A (H1N1) 2009 Monovalent Vaccine is prepared from influenza virus propagated in the allantoic fluid of embryonated chicken eggs. Following harvest, the virus is purified in a sucrose density gradient using a continuous flow zonal centrifuge. The purified virus is inactivated with beta-propiolactone, and the virus particles are disrupted using sodium taurodeoxycholate to produce a “split virion”. The disrupted virus is further purified and suspended in a phosphate buffered isotonic solution.

Influenza A (H1N1) 2009 Monovalent Vaccine is formulated to contain 15 mcg HA per 0.5 mL dose of influenza A/California/7/2009 (H1N1)v-like virus.

The single-dose formulation is preservative-free; thimerosal, a mercury derivative, is not used in the manufacturing process for this formulation. The multi-dose formulation contains thimerosal, added as a preservative; each 0.5 mL dose contains 24.5 mcg of mercury.

A single 0.5 mL dose of Influenza A (H1N1) 2009 Monovalent Vaccine contains sodium chloride (4.1 mg), monobasic sodium phosphate (80 mcg), dibasic sodium phosphate (300 mcg), monobasic potassium phosphate (20 mcg), potassium chloride (20 mcg), and calcium chloride (1.5 mcg). From the manufacturing process, each dose may also contain residual amounts of sodium taurodeoxycholate (≤ 10 ppm), ovalbumin (≤ 1 mcg), neomycin sulfate (≤ 0.2 picograms [pg]), polymyxin B (≤ 0.03 pg), and beta-propiolactone (< 25 nanograms).

The rubber tip cap and plunger used for the preservative-free, single-dose syringes and the rubber stoppers used for the multi-dose vial contain no latex.

12 CLINICAL PHARMACOLOGY**12.1 Mechanism of Action**

Influenza illness and its complications follow infection with influenza viruses. Global surveillance of influenza identifies yearly antigenic variants. For example, since 1977 antigenic variants of influenza A (H1N1 and H3N2) and influenza B viruses have been in global circulation. Specific levels of HI antibody titers post-vaccination with inactivated influenza virus vaccine have not been correlated with protection from influenza virus. In some human studies, antibody titers of 1:40 or greater have been associated with protection from influenza illness in up to 50% of subjects.^{1,2}

Antibody against one influenza virus type or subtype confers limited or no protection against another. Furthermore, antibody to one antigenic variant of influenza virus might not protect against a new antigenic variant of the same type or subtype. Frequent development of antigenic

Package insert

284 variants through antigenic drift is the virologic basis for seasonal epidemics and the reason for
285 the usual change to one or more new strains in each year's influenza vaccine.

286

287

288 13 NONCLINICAL TOXICOLOGY

289

290 13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

291 Neither Influenza A (H1N1) 2009 Monovalent Vaccine nor AFLURIA has been evaluated for
292 carcinogenic or mutagenic potential or for impairment of fertility.

293

294

295 14 CLINICAL STUDIES

296

297 CSL's Influenza A (H1N1) 2009 Monovalent Vaccine and seasonal trivalent Influenza Virus
298 Vaccine (AFLURIA) are manufactured by the same process. Data in this section were obtained
299 in clinical studies conducted with AFLURIA.

300

301 Three randomized, controlled clinical studies of AFLURIA have evaluated the immune
302 responses (specifically, HI antibody titers) to each virus strain in the vaccine. In these studies,
303 post-vaccination immunogenicity was evaluated on sera obtained 21 days after administration
304 of AFLURIA. No controlled clinical studies demonstrating a decrease in influenza disease after
305 vaccination with AFLURIA have been performed.

306

307 The US study (Study 1) was a randomized, double-blinded, placebo-controlled, multicenter
308 study in healthy subjects ages 18 to less than 65 years. A total of 1,357 subjects were
309 vaccinated (1,089 subjects with AFLURIA and 268 with a thimerosal-containing placebo).
310 Subjects receiving AFLURIA were vaccinated using either a single-dose (preservative-free) or
311 multi-dose (one of three lots) formulation. The evaluable efficacy population consisted of 1,341
312 subjects (1,077 in the AFLURIA group and 264 in the placebo group) with complete serological
313 data who had not received any contraindicated medications before the post-vaccination
314 immunogenicity assessment. Among the evaluable efficacy population receiving AFLURIA,
315 37.5% were men and 62.5% were women. The mean age of the entire evaluable population
316 receiving AFLURIA was 38 years; 73% were ages 18 to less than 50 years and 27% were ages
317 50 to less than 65 years. Additionally, 81% of AFLURIA recipients were White, 12% Black,
318 and 6% Asian.

319

320 In Study 1, the following co-primary immunogenicity endpoints were assessed: 1) the lower
321 bounds of the 2-sided 95% confidence intervals (CI) for the proportion of subjects with HI
322 antibody titers of 1:40 or greater after vaccination, which should exceed 70% for each vaccine
323 antigen strain; and 2) the lower bounds of the 2-sided 95% CI for rates of seroconversion
324 (defined as a 4-fold increase in post-vaccination HI antibody titers from pre-vaccination titers of
325 1:10 or greater, or an increase in titers from less than 1:10 to 1:40 or greater), which should
326 exceed 40% for each vaccine antigen strain.

Package insert

327
 328 In subjects ages 18 to less than 65 years, serum HI antibody responses to AFLURIA met the
 329 pre-specified co-primary endpoint criteria for all three virus strains (Table 3). Clinical lot-to-lot
 330 consistency was demonstrated for the single-dose (preservative-free) and multi-dose
 331 formulations of AFLURIA, showing that these formulations elicited similar immune responses.
 332

333 **Table 3: Study 1 – Serum HI Antibody Responses in Subjects ≥ 18 to < 65 Years Receiving**
 334 **AFLURIA**
 335

Treatment Arm	Number Enrolled/ Evaluable	Vaccine Strain	Seroconversion Rate* (95% CI)	HI Titer ≥ 1:40† (95% CI)
All active AFLURIA influenza vaccine formulations‡	1089/1077	H1N1	48.7% (45.6, 51.7)	97.8% (96.7, 98.6)
		H3N2	71.5% (68.7, 74.2)	99.9% (99.5, 100.0)
		B	69.7% (66.9, 72.5)	94.2% (92.7, 95.6)
Placebo	270/264	H1N1	2.3% (0.8, 4.9)	74.6% (68.9, 79.8)
		H3N2	0.0% (N/A)	72.0% (66.1, 77.3)
		B	0.4% (< 0.1, 2.1)	47.0% (40.8, 53.2)

336 * Seroconversion rate is defined as a 4-fold increase in post-vaccination HI antibody titer from pre-vaccination titer ≥ 1:10, or
 337 an increase in titer from < 1:10 to ≥ 1:40. Lower bound of 95% CI for seroconversion should be > 40% for the study
 338 population.

339 † HI titer ≥ 1:40 is defined as the proportion of subjects with a minimum post-vaccination HI antibody titer of 1:40. Lower
 340 bound of 95% CI for HI antibody titer ≥ 1:40 should be > 70% for the study population.

341 ‡ Active formulations include aggregated results for the single-dose (preservative-free) and multi-dose formulations of
 342 AFLURIA.

343
 344 The UK study (Study 2) was a randomized, controlled study that enrolled 275 healthy subjects
 345 ages 65 years and older. This study compared AFLURIA with a European-licensed trivalent
 346 inactivated influenza vaccine as an active control. The evaluable efficacy population consisted
 347 of 274 subjects (206 in the AFLURIA group and 68 in the control group). Among these
 348 subjects, 50% were men and 50% were women, with a mean age of 72 years (range: 65 to 93
 349 years).

350
 351 The co-primary immunogenicity endpoints for the seroconversion rate and the proportion of
 352 subjects with a minimum post-vaccination HI antibody titer of 1:40 are presented in Table 4.
 353

Package insert

354 **Table 4: Study 2 – Serum HI Antibody Responses in Subjects ≥ 65 Years Receiving**
 355 **AFLURIA**

356

Number of Subjects	Vaccine Strain	Seroconversion Rate* (95% CI)	HI Titer ≥ 1:40† (95% CI)
206	H1N1	34.0% (27.5, 40.9)	85.0% (79.3, 89.5)
	H3N2	44.2% (37.3, 51.2)	99.5% (97.3, 100.0)
	B	45.6% (38.7, 52.7)	77.7% (71.4, 83.2)

357 * Seroconversion rate is defined as a 4-fold increase in post-vaccination HI antibody titer from pre-vaccination titer ≥ 1:10, or
 358 an increase in titer from < 1:10 to ≥ 1:40. Lower bound of 95% CI for seroconversion should be > 30% for the study
 359 population.

360 † HI titer ≥ 1:40 is defined as the proportion of subjects with a minimum post-vaccination HI antibody titer of 1:40. Lower
 361 bound of 95% CI for HI antibody titer ≥ 1:40 should be > 60% for the study population.

362

363 A second UK study (Study 3) was a randomized, controlled study that enrolled 406 healthy
 364 subjects ages 18 years and older (stratified by age from 18 to less than 60 years and 60 years
 365 and older). This study compared AFLURIA with a European-licensed trivalent inactivated
 366 influenza vaccine as an active control. In a post-hoc analysis of different age ranges, among
 367 subjects ages 18 to less than 65 years receiving AFLURIA (146 subjects), 47% were men and
 368 53% were women, with a mean age of 48 years for all subjects. Among subjects ages 65 years
 369 and older receiving AFLURIA (60 subjects), 53% were men and 47% were women, with a
 370 mean age of 71 years.

371

372 The post-hoc analysis of serum HI antibody responses showed that the lower bound of the 95%
 373 CI for subjects with HI antibody titers of 1:40 or greater after vaccination exceeded 70% for
 374 each strain. HI antibody responses were lower in subjects ages 65 years and older after
 375 administration of AFLURIA. Serum HI antibody responses to the active control were similar to
 376 those for AFLURIA in both age groups.

377

378

Package insert

379 **15 REFERENCES**

380
 381 1. Hannoun C, Megas F, Piercy J. Immunogenicity and protective efficacy of influenza
 382 vaccination. *Virus Res* 2004;103:133-138.
 383 2. Hobson D, Curry RL, Beare AS, et al. The role of serum hemagglutination-inhibiting
 384 antibody in protection against challenge infection with influenza A2 and B viruses.
 385 *J Hyg Camb* 1972;70:767-777.
 386
 387

388 **16 HOW SUPPLIED/STORAGE AND HANDLING**

389
 390 Influenza A (H1N1) 2009 Monovalent Vaccine is supplied as a 0.5 mL preservative-free,
 391 single-dose, pre-filled syringe (packaged without needles) and as a 5 mL multi-dose vial
 392 containing ten 0.5 mL doses, with thimerosal, a mercury derivative, added as a preservative;
 393 each 0.5 mL dose contains 24.5 mcg of mercury.
 394

Product Description	NDC Number
Package of ten 0.5 mL single-dose, preservative-free, prefilled syringes	33332-519-01
Package of one 5 mL multi-dose vial; the vial contains ten 0.5 mL doses	33332-629-10

395
 396 Store refrigerated at 2–8°C (36–46°F). Do not freeze. Protect from light. Do not use Influenza
 397 A (H1N1) 2009 Monovalent Vaccine beyond the expiration date printed on the label.
 398
 399

400 **17 PATIENT COUNSELING INFORMATION**

- 401
 402 • Inform vaccine recipients that Influenza A (H1N1) 2009 Monovalent Vaccine is an
 403 inactivated vaccine that cannot cause influenza but rather stimulates the immune
 404 system to produce antibodies.
 405
 406 • Instruct vaccine recipients to report any severe or unusual adverse reactions to their
 407 healthcare provider.
 408
 409 • Inform vaccine recipients that there are two influenza vaccine formulations for this
 410 influenza season, the monovalent vaccine against influenza disease caused by
 411 pandemic (H1N1) 2009 influenza virus and seasonal trivalent influenza vaccine.
 412
 413



Package insert

414 Manufactured by:
415 **CSL Limited**
416 Parkville, Victoria, 3052, Australia
417 US License No. 1764
418
419
420 Distributed by:
421 **CSL Biotherapies Inc.**
422 King of Prussia, PA 19406 USA
423
424
425 AFLURIA is a registered trademark of CSL Limited.