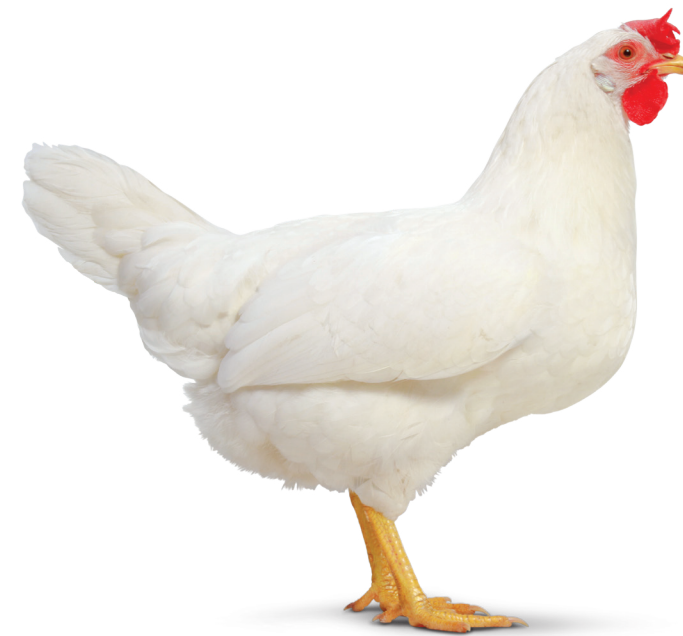


AVIPRO® MEGAN® EGG

Layers

VACCINES



Salmonella Protection is an Everyday Investment

As part of a comprehensive *Salmonella* control program, AviPro® Megan® Egg is a safe, effective and targeted intervention providing *Salmonella* protection every day.^{1,2} Mitigating risk from egg to consumer starts by prioritizing bird health, food chain safety and brand protection with a consistent, comprehensive *Salmonella* control program.

The label contains complete use information, including cautions and warnings. Always read, understand and follow label and use directions.

AviPro Megan Egg is a USDA-licensed vaccine recommended for the vaccination of pullet chickens as an aid in the reduction of SE colonization of the internal organs, including the ovaries and oviduct, and the intestinal tract and ceca.

AviPro Megan Egg Directions For Use:

Vaccinate pullets at 2 weeks of age by coarse spray application, followed by revaccinations at 4 and 16 weeks of age by coarse spray application.

Dose:

For a vaccine vial of 2,500 doses, mix the vial contents with the appropriate volume of cool, nonchlorinated, sterile water to vaccinate 2,500 birds.

WARNING: Do not vaccinate within 21 days before slaughter.

CAUTION: Store at 2° – 8°C (35° – 46°F). Do not freeze.

Contact Elanco with questions at 1-800-428-4441 or 1-888-545-5973.

FOR VETERINARY USE ONLY

¹Elanco Animal Health. Data on file.

²Elanco Animal Health. Data on file.

³Holt PS, et al. Use of a live attenuated *Salmonella* Typhimurium vaccine to protect hens against *Salmonella* Enteritidis infection while undergoing molt. *Avian Dis.* 2003;47:656-661.

⁴McReynolds, et al. Evaluation of a competitive exclusion culture and Megan Vac 1 on *Salmonella* Typhimurium colonization in neonatal broiler chickens. *J. Appl. Poult. Res.* 2007;16:456-463.

⁵Van Immerseel, et al. The effect of vaccination with *Salmonella* Enteritidis aroA mutant on early cellular responses in caecal lamina propria of newly-hatched chickens. *Vaccine.* 2002;20:3034-3041.

⁶Elanco Animal Health. Data on file.

⁷Elanco Animal Health. Data on file.

Reduce Shedding, Reduce Prevalence

The major obstacle to *Salmonella* control in the poultry industry is the ubiquitous presence of *Salmonella*. Poultry can be latent carriers, shedding and spreading *Salmonella* when stressed. Preventing colonization as early and effectively as possible reduces shedding — and subsequently the spread of *Salmonella*.

AviPro Megan Egg stimulates protective immunity and reduces *Salmonella* Enteritidis (SE) infections in laying hens — ultimately contributing to reduced environmental prevalence over time.^{2,3} Live *Salmonella* Typhimurium (ST) vaccines, such as AviPro Megan Egg, provide a competitive exclusion (CE) effect against wild-type *Salmonella* and immunity as early as 12 hours.^{4,5} In addition, AviPro Megan Egg can be easily identified by its unique biochemical profile compared to wild-type *Salmonella*.⁶

Application of AviPro Megan Egg

AviPro Megan Egg vaccine's three-dose protocol easily adapts to vaccine programs. When applied to flocks as a coarse spray, the vaccine mimics the natural route of infection, triggering long-term protective immunity against SE infections.¹ Applying AviPro Megan Egg to flocks in molt provides hens with direct resistance against infection by SE.³

Application of Inactivated Vaccines

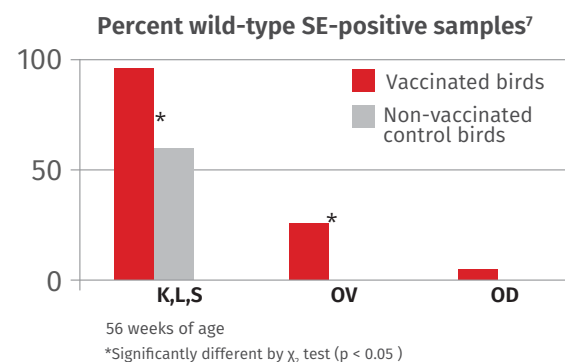
Megan Egg is recommended as part of a full Salmonella control program, including biosecurity, integrated pest management and a full vaccination program.

AviPro 329 ND-IB2-SE4 is recommended for the vaccination of chickens as an aid in the prevention of Newcastle disease and Infectious Bronchitis (Mass. and Ark. types) and as an aid to reduce SE colonization of the internal organs, including the reproductive tract. Vaccinate with live-virus vaccines for Newcastle disease and bronchitis at least four weeks prior to the use of this vaccine. Vaccinate subcutaneously at 12 and 16 weeks of age or intramuscularly at 13 and 17 weeks of age. Revaccinate with monovalent SE bacterin four weeks later. Revaccinate during molt.

Live Vaccines

In a controlled study, AviPro Megan Egg showed reduction of SE infection in laying hens. Pullet hens were vaccinated at 2, 4 and 16 weeks of age by coarse spray and were then challenged with SE at 56 weeks.* Birds treated with AviPro Megan Egg showed significantly reduced *Salmonella* colonization post-challenge in internal organs [kidney, liver, spleen (K,L,S)] and ovaries (OV) and oviduct (OD) tissues as compared to nonvaccinated hens.⁷

Effectiveness of AviPro Megan Egg to reduce wild-type SE colonization after challenge of laying hens at 56 weeks of age



*In addition to the two SE-challenged groups, 20 birds were held as nonvaccinated, nonchallenged controls.

Effective Control

A *Salmonella* vaccination program that includes both live and inactivated vaccines can be effective in reducing SE infection of laying hens.

Live vaccines (e.g., AviPro Megan Egg) provide benefits such as:

- Competitive exclusion effect
- Intestinal protection
- Stimulation of memory immune cells

Inactivated vaccines (e.g., AviPro 109 SE4 and AviPro 329 ND-IB2-SE4) stimulate circulating antibodies, which allow for:

- Continued, long-term protection to specific serovars
- Deposition of yolk antibody (IgY) in the egg

Comprehensive Control

A comprehensive *Salmonella* control program is necessary to disrupt the transmission of *Salmonella*. Vaccination alone cannot be relied upon to prevent *Salmonella* infections. Conducting risk evaluations for sources of *Salmonella* entry, implementing biosecurity assessments and focusing on a proactive control program are all necessary.

Comprehensive *Salmonella* control programs should include:

- Optimizing gut health
- Strong biosecurity measures
- Environmental monitoring
- Litter management
- Pest and rodent control
- Water and feed management

It may take multiple cycles of consistent control practices and vaccination of flocks to manage the *Salmonella* burden in live production. AviPro Megan Egg provides an effective option as part of a comprehensive *Salmonella* control program.

Act Now. Protect Tomorrow.

AviPro Megan Egg is part of a broad portfolio of Elanco poultry solutions offering confident decisions and peace of mind. With both inactivated and live vaccines, Elanco offers proactive *Salmonella* protection for all segments of the poultry industry. Our dedicated Elanco team is ready to help you develop a comprehensive *Salmonella* control program today.