

Parasitin-Vet® Injection

Ivermectin 1%

Product Description:

Ivermectin is derived from the avermectins, a family of potent broad-spectrum antiparasitic agents isolated from fermentation of *Streptomyces avermitilis*. **Parasitin-Vet®** Injection is a clear, ready-to-use, sterile solution containing 1% ivermectin. **Parasitin-Vet®** Injection is formulated to deliver the recommended dose level of 200 mcg Ivermectin/kilogram of body weight in cattle when given subcutaneously at the rate of 1 ml/110 lb (50 kg).

Pharmacology:

Ivermectin is well absorbed when administered parenterally. Biological half-life is 2.9 days for cattle upon SQ administration. Therapeutic concentrations of ivermectin is maintained in body fluids for prolonged periods of time. Most of the administered dose of ivermectin is excreted in the feces, the remainder in the urine (1). Minimal residues are present in the muscle and kidneys, highest concentrations being detected in the liver and fat tissues. Residues in all tissues are extractable in nature with little or no macromolecularly bound drug or metabolites present. Ivermectin does not readily cross the blood-brain barrier of the mammal to affect the GABA within the central nervous system. In tests of brain concentration of the drug in cattle, radioactive residue assays revealed only minute traces of ivermectin. This was the lowest concentration of all tissues analyzed. There have been a number of cases of central nervous system depression in purebred and crossbred longhaired Collies (20). The reason for this breed susceptibility is not known. It has been postulated that the blood brain barrier in the Collie may be more permeable to ivermectin than in other species, allowing ivermectin to enter the central nervous system.

Mode of Action:

Ivermectin is a member of the macrocyclic lactone class of endectocides which have a unique mode of action. Compounds of the class bind selectively and with high affinity to glutamate-gated chloride ion channels which occur in invertebrate nerve and muscle cells. This leads to an increase in the permeability of the cell membrane to chloride ions with hyperpolarization of the nerve or muscle cell, resulting in paralysis and death of the parasite. Compounds of this class may also interact with other ligand-gated chloride channels, such as those gated by the neurotransmitter gamma-aminobutyric acid (GABA). The margin of safety for compounds of this class is attributable to the fact that mammals do not have glutamate-gated chloride channels, the macrocyclic lactones have a low affinity for other mammalian ligand-gated chloride channels and they do not readily cross the blood-brain barrier.

Indication:

Parasitin-Vet® Injection is indicated for the effective treatment and control of the following harmful species of gastrointestinal roundworms, lungworms, grubs, sucking lice, and mange mites in cattle: Gastrointestinal Roundworms (adults and fourth-stage larvae): *Ostertagia ostertagi* (including inhibited *O. ostertagi*), *O. lyrata*, *Haemonchus placei*, *Trichostrongylus axei*, *T. colubriformis*, *Cooperia oncophora*, *C. punctata*, *C. pectinata*, *Oesophagostomum radiatum*, *Bunostomum phlebotomum*, *Nematodirus helvetianus* (adults only), *N. spathiger* (adults only). Lungworms (adults and fourth-stage larvae): *Dictyocaulus viviparus* Cattle Grubs (parasitic stages): *Hypoderma bovis*, *H. lineatum* Sucking Lice: *Linognathus vituli*, *Haematopinus eurysternus*, *Solenopotes capillatus* Mites (scabies): *Psoroptes ovis* (syn. *P. communis* var. *bovis*), *Sarcoptes scabiei* var. *bovis*.

Benefits:

- One low-volume dose for effective treatment and control of internal and external parasites, including gastrointestinal roundworms, lungworms, grubs, sucking lice and mange mites.
- Reliable, long-lasting parasite control of cattle, which improves performance benefits.
- Proven to effectively control infections and to protect cattle and swine from re-infection.
- No effect on breeding performance when used at the recommended dosage.
- Convenient low dosage of only 1 ml per 50 Kg body weight for cattle.

Persistent Activity:

Parasitin-Vet® Injection has been proved to effectively control infections and to protect cattle from reinfection with *Dictyocaulus viviparus* and *Oesophagostomum radiatum* for 28 days after treatment; *Ostertagia ostertagi*, *Trichostrongylus axei* and *Cooperia punctata* for 21 days after treatment; *Haemonchus placei* and *Cooperia oncophora* for 14 days after treatment.

Dosage & Administration:

Parasitin-Vet® Injection should be given only by subcutaneous injection under the loose skin in front of or behind the shoulder at the recommended dose level of 200 mcg of Ivermectin per kilogram of body weight. Each ml of Parasitin-Vet Injection contains 10 mg of Ivermectin, sufficient to treat 110 lb (50 kg) of body weight (maximum 10 mL per injection site).

Contraindication:

Patients with a history of hypersensitivity to Ivermectin or to other macrocyclic lactones are contraindicated for this drug.

Use in Pregnancy and Lactation:

Parasitin-Vet® Injection is considered to be safe to use during pregnancy. Reproductive studies performed in dogs, horses, cattle and swine have not demonstrated adverse effects to fetuses. Reproductive performance in male animals is also apparently unaltered.

Adverse effects:

Transitory discomfort has been observed in some cattle following subcutaneous administration. A low incidence of soft tissue swelling at the injection site has been observed. These reactions have disappeared without treatment.

Precaution:

This product is not for intravenous or intramuscular use. Use sterile equipment and sanitize the injection site by applying a suitable disinfectant. Clean, properly disinfected needles should be used to reduce the potential for injection site infections. Do not treat cattle within 35 days of slaughter. Because a withdrawal time in milk has not been established, do not use in female dairy cattle of breeding age.

Drug Interaction:

None were located.

Storage:

Store between 15°C - 30°C temperature and dry place. Protect from light & keep out of reach of children.

Package quantities:

10 ml vial