

**DESCRIPTION:**

VESTIFUR injection contains the sodium salt of Ceftiofur, a broad spectrum cephalosporin anti-bacterial active against aerobic and anaerobic gram-positive and gram-negative bacteria including Beta-lactamase-producing strains.

Ceftiofur Sodium (C<sub>19</sub>H<sub>16</sub>N<sub>5</sub>NaO<sub>7</sub>S<sub>3</sub>) has a molecular weight of 545.54 and chemically is 5-Thai-1-azabicyclo[4.2.0]Oct-2-ene-carbolic acid, 7-[[2-amino-4-iazoly]{methoxyimino}-Acetyl amino]-3-[[{(2-furanylcarbonyl)thio]methyl]-8-oxo-mono sodium salt.

**PHARMACOLOGY****MECHANISM OF ACTION:**

Ceftiofur produces its bactericidal effect by inhibition of bacterial cell wall synthesis. The site of action for beta-lactam antibacterial is the penicillin-binding proteins(PBPs) on the inner surface of the bacterial cell membrane that interfere in production of peptidoglycans and subsequently lysis of the bacterial cell

**PHARMACOKINETICS:**

After administration, Ceftiofur disposition follows the two compartment model and attains peak serum concentration within 30-60 minutes in adult cattle, 70 minutes in goat and 60 minutes in horse after IM administration and 45 minutes in dog and 50 minutes in chick after SC administration with wide distribution in body tissues. Ceftiofur in the body is metabolized into desfuroylceftiofur, the principle active metabolites. Desfuroylceftiofur has an equivalent anti-microbial activity to Ceftiofur against the bacteria. The active metabolite is reversibly bound to plasma proteins. Due to transportation with these proteins, the metabolite concentrates at site of infections, is active and remains active in presence of necrotic tissue and debris.

**INDICATIONS:**

**Cattle & buffalo:** Vestifur is indicated for the treatment of

- Respiratory Tract infections viz Haemorrhagic Septicemia and Pneumonia associated with *Pasterurella multocida*, *Actinobacillus pluropenumoniae*, *Pastrurella heamolytica*, *Mannheimia haemolytica* and *Histophilus somni*.
- Reproductive Tract infections viz Acute Metritis, Toxic Puerperal Metritis, Pyometra, Vaginitis, Cervicitis associated with *Esherichia coli*, *Arcaebacterium pyogenes*, *staphylococcus aureus*, *staphylococcus agalactiae*, *staphylococcus dysgalactiae*, *Streptococcus bovis*, *Streptococcus uberis* and *Streptococcus zooepidemicus*.
- Interdigital Necrobacillosis, Foot Rot and Pododermatitis caused by *Fusobacterium*
- Infectious Bovine Keratoconjunctivitis due to *Moraxella bovis*.

**Sheep & Goat**

Vestifur is indicated for the treatment of

- Pneumonia associated with *Pasteurella multocida* and *Mannheimia haemolytica*
- Metritis associated with *Clostridial spp.*
- Foot Rot associated with *Fusobacterium necrophorum* and *Bacteroides nodosus*

**Dog:**

Vestifur is indicated for the treatment of canine urinary tract infections associated with *Esherichia coli* and *Proteus mirabilis*.

**Horse:**

Vestifur is indicated for treatment of respiratory infections in horses associated with *Streptococcus zooepidemicus*.

**Swine:**

Vestifur is indicated for treatment of swine bacterial respiratory disease (swine bacterial pneumonia) associated with *Actinobacillus pleuropneumoniae* and *Pasteurella multocida*, *Salmonella cholera suis* and *Streptococcus suis*.

**Chickens(day old Chicks):**

Vestifur is indicated for the treatment of early mortality associated with *Escherichia coli*.

**Dosage and Administration**

Species	Route of Administration	Dose Rate
Cattle , Sheep & Goat	IM/SC	1.1 to 2.2 mg/kg b.wt. once daily for 3-5 days (1-2ml/45.45 kg. b.wt. after reconstitution)
Buffalo	IM/SC	2.0 to 2.4 mg/kg b.wt. once daily for 3-5 days (2-2.4ml/50 kg. b.wt. after reconstitution)
Horse	IM	2.2 to 4.4 mg/kg b.wt. once daily for 3-5 days (1-2ml/22.72 kg. b.wt. after reconstitution)
Swine	IM	3.0 to 5.0 mg/kg b.wt. once daily for 3-5 days (1-1.7ml/16.66 kg. b.wt. after reconstitution)
Dog	SC	2.2 mg/kg b.wt. once daily for 3-5 days (1ml/50 kg. b.wt. after reconstitution)
Chicken	SC	0.08 to 0.20 mg/Chick

**CONTRAINDICATION:**

Ceftiofur is contraindicated in animals with known history of allergy to Cephalosporins

**PRESENTATION**

Vestifur along with 20 ml Sterile water for Injection I.P.