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## APPROVED PROFESSIONAL INFORMATION

### SCHEDULING STATUS

S4

### PROPRIETARY NAME (and dosage form)

**LIZORP 250 mg** (Tablet)

**LIZORP 500 mg** (Tablet)

### COMPOSITION

#### **LIZORP 250 mg:**

Each film coated tablet contains cefprozil monohydrate) equivalent to anhydrous cefprozil 250 mg.

#### **LIZORP 500 mg:**

Each film coated tablet contains cefprozil monohydrate equivalent to anhydrous cefprozil 500 mg.

The other ingredients of **LIZORP** are cellulose microcrystalline (Avicel PH 102); lactose; magnesium stearate; sodium starch glycolate (Type A) and Opadry Orange YS-1-2456. The imprinting materials used in **LIZORP** are Opacode Black S-1-17734 and isopropyl alcohol.

### PHARMACOLOGICAL CLASSIFICATION

A 20.1.1 Broad and Medium Spectrum Antibiotics

### PHARMACOLOGICAL ACTION

Cefprozil belongs to a sub-group of beta-lactam antibiotics, cephalosporins (second generation). It is bactericidal and acts by inhibiting synthesis of bacterial cell wall.

#### **Microbiology:**

Cefprozil has *in vitro* activity against the Gram positive and Gram negative bacteria.

(*In vitro* activity does not necessarily imply *in vivo* efficacy).

### **Resistant Organisms**

#### **Aerobes, Gram-positive**

Cefprozil is inactive against methicillin-resistant staphylococci and *E. faecium*.

#### **Aerobes, Gram-negative**

Cefprozil is inactive against most strains of *Acinetobacter*, *Enterobacter*, *Morganella morganii*, *Proteus vulgaris*, *Providencia*, *Pseudomonas* and *Serratia*.

#### **Anaerobes**

**NOTE:** Most strains of the *Bacteroides fragilis* group are resistant to cefprozil.

### **INDICATIONS**

**LIZORP** is indicated for the treatment of patients with mild to moderately severe infections caused by non-penicillinase-producing cephalosporin susceptible strains of the designated micro-organisms listed below:

#### **Upper respiratory tract:**

Pharyngitis/tonsillitis caused by *Streptococcus pyogenes*.

**NOTE:** The usual agent of choice in the treatment and prevention of Streptococcal infections, including the prophylaxis of rheumatic fever, is penicillin. **LIZORP** is effective in the eradication of *Streptococcus pyogenes* from the nasopharynx. However, substantial data establishing the efficacy of **LIZORP** in the subsequent prevention of rheumatic fever are not available at present.

#### **Otitis media and sinusitis:**

Otitis media and sinusitis caused by *Streptococcus pneumoniae*, *Haemophilus influenzae* and *Branhamella catarrhalis*.

**NOTE:** In the treatment of otitis media and sinusitis due to beta-lactamase producing organisms, **LIZORP** had bacteriologic eradication rates somewhat lower than those observed with a product containing a

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specific beta-lactamase inhibitor. In considering the use of **LIZORP**, lower overall eradication rates should be balanced against the susceptibility patterns of the common microbes in a given geographic area and the increased potential for toxicity with products containing beta-lactamase inhibitors.

**Lower respiratory tract:**

Secondary bacterial infection of acute bronchitis and acute bacterial exacerbation of chronic bronchitis caused by *Streptococcus pneumonia*, *Haemophilus influenza* (beta-lactamase positive and negative strains) and *Branhamella catarrhalis*.

**Skin and skin structure:**

Uncomplicated skin and skin structure infections caused by *Staphylococcus aureus* (including penicillinase-producing strains) and *Streptococcus pyogenes*.

**Urinary tract:**

Uncomplicated urinary tract infections including acute cystitis in women caused by *Escherichia coli*, *Klebsiella pneumonia* and *Proteus mirabilis*.

**NOTE:** Culture and susceptibility testing should be performed when appropriate to determine susceptibility of the causative organism to **LIZORP**.

**CONTRA-INDICATIONS**

**LIZORP** is contraindicated in patients with known allergy to the cephalosporin class of antibiotics as well as other beta-lactam group of antibiotics, e.g. penicillin, or any component of the formulation (see “**WARNINGS**”).

Children below the age of 1 year.

Pregnancy and lactation.

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## **WARNINGS**

Before therapy with **LIZORP** is instituted, careful inquiry should be made to determine whether the patients have had previous hypersensitivity reactions to **LIZORP**, other cephalosporins, penicillins, or other medicine. If this product is to be given to penicillin-sensitive patients, caution should be exercised because cross-sensitivity among beta-lactam antibiotics has been documented. If an allergic reaction to **LIZORP** occurs, discontinue the medication. Serious acute hypersensitivity reactions may require emergency treatment measures.

### **Paediatric Use:**

Safety and effectiveness in children below the age of 1 year have not been established.

Accumulation of other cephalosporin antibiotics in newborn infants (resulting from prolonged medicine half-life in this age group) has been reported.

## **INTERACTIONS**

**LIZORP** can inhibit vitamin K synthesis by suppressing gut flora which may increase the risk of bleeding. In addition, there have been reports of prothrombin times being increased in patients taking **LIZORP** tablets and warfarin, in particular. Dosage adjustment of anti-coagulant medicine may be necessary pre- and post-treatment with **LIZORP** tablets.

Concomitant administration of **LIZORP** and aminoglycoside antibiotics causes nephrotoxicity.

### **Laboratory Test Interactions:**

**LIZORP** may produce a false positive reaction for glucose in the urine with copper reduction tests (Benedict's or Fehling's solution or with Clinitest tablets), but not with enzyme-based tests (glucose oxidase) for glycosuria. A false negative reaction may occur in the ferricyanide test for blood glucose. The presence of **LIZORP** in the blood does not interfere with the assay of plasma or urine creatinine by the alkaline picrate method.

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## PREGNANCY AND LACTATION

Safety of use in pregnancy and lactation has not been established (see “**CONTRAINDICATIONS**”).

## DOSAGE AND DIRECTIONS FOR USE

### Adults and children over 12 years

**LIZORP** is administered orally for a period of 10 days in the treatment of infections due to susceptible bacteria in the following:

<b>Upper respiratory infections:</b>	500 mg every 24 hours
<b>Lower respiratory infections:</b>	500 mg every 12 hours
<b>Sinusitis:</b>	250 mg every 12 hours or 500 mg every 12 hours
<b>Uncomplicated urinary tract infections:</b>	500 mg every 24 hours
<b>Skin &amp; skin structure infections:</b>	250 mg every 12 hours or 500 mg every 12 or 24 hours

### Renal Impairment:

**LIZORP** may be administered to patients with impaired renal function. No dosage adjustment is necessary for patients with creatinine clearance values > 30 ml/min.

For those with creatinine clearance values  $\leq$  30 ml/min, 50 % of the standard dose should be given at the standard dosing interval. **LIZORP** is in part removed by haemodialysis; therefore, **LIZORP** should be administered after the completion of haemodialysis.

### Hepatic Impairment:

No dosage adjustment is necessary for patients with impaired hepatic function.

### **Children less than 12 years old**

This formulation is not suitable for children less than 12 years old.

## SIDE EFFECTS AND SPECIAL PRECAUTIONS

### **Side effects:**

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Blood and the lymphatic system disorders:

*Frequent:* Eosinophilia.

*Less frequent:* Neutropenia, thrombocytopenia. Prolonged PT/INR has been observed.

Immune system disorders:

*Less frequent:* Anaphylaxis, fever, serum sickness.

*The following side effects have been reported and frequencies are unknown:*

Angioedema

Nervous system disorders:

*The following side effects have been reported and frequencies are unknown:*

Dizziness, hyperactivity, headache, nervousness, insomnia, confusion and somnolence.

Gastrointestinal disorders:

*Frequent:* Nausea, vomiting, diarrhoea, pseudomembranous colitis and abdominal pain.

Hepato-biliary disorders:

*Less frequent:* Cholestatic jaundice.

*The following side effects have been reported and frequencies are unknown:*

Elevations of AST (SGOT), ALT (SGPT), alkaline phosphatase, bilirubin values.

Skin and subcutaneous tissue disorders:

*Less frequent:* Erythema multiforme, Stevens-Johnson syndrome, superinfection, rash, urticarial, general pruritus.

Renal and urinary disorders:

*The following side effects have been reported and frequencies are unknown:*

Elevations in blood urea and serum creatinine.

Reproductive system and breast disorders:

*Less frequent:* Vaginitis.

**Special precautions:**

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Pseudomembranous colitis has been reported with the use of **LIZORP**. Symptoms of pseudomembranous colitis include severe, persistent diarrhoea, severe abdominal cramps as well as bloody stools. Extreme caution must be practiced in patients using **LIZORP** who have a history of gastrointestinal diseases.

Patients experiencing extreme diarrhoea while taking **LIZORP** must discontinue treatment immediately and seek emergency medical advice.

Evaluation of renal status before and during therapy is recommended, especially in seriously ill patients. In patients with known or suspected renal impairment (see “**DOSAGE AND DIRECTIONS FOR USE**”), careful clinical observation and appropriate laboratory studies should be done prior to and during therapy.

The total daily dose of **LIZORP** should be reduced in these patients because high and/or prolonged plasma antibiotic concentrations can occur in such individuals from usual doses. Cephalosporins, including **LIZORP**, should be given with caution to patients receiving concurrent treatment with potent diuretics since these agents are suspected of adversely affecting renal function.

Prolonged use of **LIZORP** may result in the overgrowth of non-susceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with cephalosporin antibiotics such as **LIZORP**.

**LIZORP** contains lactose. Patients with rare hereditary problems of galactose intolerance, the Lapp Lactase deficiency or glucose-galactose malabsorption should not take **LIZORP**.

#### **Effects on ability to drive and use machinery**

The potential for dizziness should be taken into account before patients on **LIZORP** drive or use machinery.

#### **KNOWN SYMPTOMS OF OVER DOSAGE AND PARTICULARS OF ITS TREATMENT**

(See “**SIDE EFFECTS AND SPECIAL PRECAUTIONS**”)

In case of severe overdosage, especially in patients with compromised renal function, haemodialysis will aid in the removal of **LIZORP** from the body.

## IDENTIFICATION

### LIZORP 250 mg:

Orange coloured, biconvex, film-coated caplets imprinted "C16" with black ink on one side.

### LIZORP 500 mg:

White, biconvex, film-coated caplets imprinted "C17" with black ink on one side.

## PRESENTATION

### 1. PVC/ACLAR-Aluminium blister packs:

Tablets are packed in 250 Micron Clear PVC Film Laminated with 23 Micron Aclar (width 200 mm) as the forming material and aluminium foil 25 microns width 194 mm) as the lidding material. Each blister contains 10 tablets.

Pack size: 10's: Each carton contains 1 blister of 10 tablets along with package insert.

### 2. PVC/PVdC-Aluminium blister packs:

Tablets are packed in clear 250 Micron PVC coated with 60 gsm PVdC (width 200 mm) as the forming material and aluminium foil 25 microns (width 194 mm) as the lidding material. Each blister contains 10 tablets.

Pack size: 10's: Each carton contains 1 blister of 10 tablets along with package insert.

## STORAGE INSTRUCTIONS

Store at or below 30 °C. KEEP OUT OF REACH OF CHILDREN.

## REGISTRATION NUMBER

**LIZORP 250 mg:** 41/20.1.1/0586

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**NAME AND BUSINESS ADDRESS OF THE HOLDER OF THE CERTIFICATE**

**OF REGISTRATION**

**Aurogen South Africa (Pty) Ltd**

Woodhill Office Park, Building 1,

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**DATE OF PUBLICATION OF THE PACKAGE INSERT**

**Date of registration:**

5 December 2013

**Date of revision:**

01 August 2021