

## **SUMMARY OF PRODUCT CHARACTERISTICS**

### **1 NAME OF THE MEDICINAL PRODUCT**

Nifedipine Capsules 5mg

### **2 QUALITATIVE AND QUANTITATIVE COMPOSITION**

Each capsule contains nifedipine BP 5mg.

For the full list of excipients, see section 6.1.

### **3 PHARMACEUTICAL FORM**

Soft gelatin capsule

Nifedipine Capsules 5mg are shiny, oval, light red soft gelatine capsules.

Plain practically odourless

### **4 CLINICAL PARTICULARS**

#### **4.1 Therapeutic indications**

Used in the prophylaxis of chronic stable angina pectoris and in the treatment of hypertension and Raynaud's phenomenon.

Nifedipine is a potent antagonist of calcium influx through the slow channel of the cell membrane of cardiac and smooth muscle cells. It is known to be an effective and relatively well tolerated prophylaxis for chronic stable angina and mild to severe hypertension. The antihypertensive effects of nifedipine are achieved by causing peripheral vasodilation resulting in a reduction in peripheral resistance.

Nifedipine reduces blood pressure in hypertension but has little effect in normotensive individuals. It has no therapeutic antiarrhythmic effect.

## **4.2 Posology and method of administration**

### Adults:

The recommended starting dose is 5mg, every 8 hours, swallowed with water, with subsequent titration of dosage according to response. The dosage may be adjusted to 20mg, every 8 hours.

Patients on concomitant therapy and patients with liver dysfunction should be carefully monitored. Nifedipine is metabolised primarily by the liver.

Dosage adjustments should not be required for patients with renal impairment.

### Elderly (>65 years):

The pharmacokinetics of nifedipine are altered in the elderly so that lower maintenance doses of nifedipine may be required.

### Paediatric population:

The safety and efficacy of Nifedipine in children under the age 18 years have not been established.

Currently available data for the use of Nifedipine in hypertension are described in section 5.1

### Method of administration: oral

Nifedipine capsules should not be taken with grapefruit juice (see section 4.5).

## **4.3 Contraindications**

Nifedipine capsules must not be administered to patients with known hypersensitivity to the active substance, or to other dihydropyridines because of the theoretical risk of cross reactivity, or to any of the excipients listed in section 6.1.

They should not be used in women who are or who may become pregnant (see section 4.6).

Nifedipine capsules must not be used in cases of cardiogenic shock, clinically significant aortic stenosis, unstable angina, or during or within 4 weeks of an acute myocardial infarction.

Nifedipine should not be used for the treatment of acute attacks of angina, or in patients who have had ischaemic pain following its administration previously.

The safety of nifedipine in malignant hypertension has not been established.

Nifedipine capsules should not be used for secondary prevention of myocardial infarction.

Nifedipine capsules are contra-indicated in patients with acute porphyria.

Nifedipine capsules should not be used in patients with Kock pouch (ileostomy after proctocolectomy).

Nifedipine capsules should not be administered concomitantly with rifampicin since effective plasma levels of nifedipine may not be achieved owing to enzyme induction (See section 4.5).

#### **4.4 Special warnings and precautions for use**

Nifedipine capsules are not beta-blockers and therefore give no protection against the dangers of abrupt beta-blocker withdrawal; any such withdrawal should be a gradual reduction of the dose of beta-blocker, preferably over 8-10 days.

Nifedipine capsules may be used in combination with beta-blocking drugs and other antihypertensive agents but the possibility of an additive effect resulting in postural hypotension should be borne in mind. Nifedipine capsules will not prevent possible rebound effects after cessation of other antihypertensive therapy.

Care must be exercised in patients with very low blood pressure (severe hypotension with systolic pressure less than 90 mm Hg).

Treatment with short-acting nifedipine induces an exaggerated fall in blood pressure with reflex tachycardia which can cause cardiovascular complications such as myocardial and cerebrovascular ischaemia.

As with other vasoactive substances, angina pectoris may very rarely occur (data from spontaneous reports) with immediate release nifedipine, especially at the start of the treatment. Data from clinical studies confirm that the occurrence of angina pectoris attacks is uncommon.

In patients suffering from angina pectoris an increase in frequency, duration and severity of angina pectoris attacks may occur, especially at the start of the treatment.

The occurrence of myocardial infarction has been described in isolated cases, although it was not possible to distinguish this from the natural course of the underlying disease.

Nifedipine capsules should not be used during pregnancy unless the clinical condition of the woman requires treatment with nifedipine. Nifedipine capsules should be reserved for women with severe hypertension who are unresponsive to standard therapy (see section 4.6).

Careful monitoring of blood pressure must be exercised when administering nifedipine with I.V. magnesium sulphate, owing to the possibility of an excessive fall in blood pressure, which could harm both mother and foetus. For further information regarding use in pregnancy, refer to section 4.6.

Nifedipine capsules are not recommended for use during breast-feeding because nifedipine has been reported to be excreted in human milk and the effects of nifedipine exposure to the infant are not known (see section 4.6).

In patients with mild, moderate or severe impaired liver function, careful monitoring, and a dose reduction may be necessary. The pharmacokinetics of nifedipine has not been investigated in patients with severe hepatic impairment (see section 4.2 and 5.2). Therefore, nifedipine should be used with caution in patients with severe hepatic impairment.

Nifedipine capsules should be used with caution in patients whose cardiac reserve is poor; in patients with heart failure or significantly impaired left ventricular function. Deterioration of heart failure has occasionally been observed with nifedipine.

At doses higher than those recommended there is some concern about increased mortality and morbidity in the treatment of ischaemic heart disease, in particular after myocardial infarction.

The use of Nifedipine in diabetic patients may require adjustment of their diabetic therapy.

In dialysis patients with malignant hypertension and irreversible renal failure with hypovolaemia, a significant drop in blood pressure may occur due to the vasodilator effects of nifedipine.

Excessive falls in blood pressure may result in transient blindness. If affected the patient should not attempt to drive or use machinery (see section 4.8).

Although a 'steal' effect has not been demonstrated, patients experiencing this effect should discontinue nifedipine therapy.

Nifedipine is metabolised via the cytochrome P450 3A4 system. Drugs that are known to either inhibit or to induce this enzyme system may therefore alter the first pass or the clearance of nifedipine (see Section 4.5).

Drugs that are known inhibitors of the cytochrome P450 3A4 system, and which may therefore lead to increased plasma concentrations of nifedipine include, for example:

- macrolide antibiotics (e.g., erythromycin)
- anti-HIV protease inhibitors (e.g., ritonavir)
- azole antimycotics (e.g., ketoconazole)
- the antidepressants, nefazodone and fluoxetine
- quinupristin/dalfopristin
- valproic acid
- cimetidine

Upon co-administration with these drugs, the blood pressure should be monitored and, if necessary, a reduction of the nifedipine dose should be considered (see Section 4.5).

For use in special populations see Section 4.2.

#### Sodium

This medicine contains less than 1mmol sodium (23mg) per capsule, that is to say essentially 'sodium-free'.

## **4.5 Interaction with other medicinal products and other forms of interaction**

### Drugs that affect nifedipine

Nifedipine is metabolised via the cytochrome P450 3A4 system, located both in the intestinal mucosa and in the liver. Drugs that are known to either inhibit or to induce this enzyme system may therefore alter the first pass (after oral administration) or the clearance of nifedipine (see Section 4.4).

The extent as well as the duration of interactions should be taken into account when administering nifedipine together with the following drugs:

*Rifampicin:* Rifampicin strongly induces the cytochrome P450 3A4 system. Upon co-administration with rifampicin, the bioavailability of nifedipine is

distinctly reduced and thus its efficacy weakened. The use of nifedipine in combination with rifampicin is therefore contraindicated (see Section 4.3).

Upon co-administration of known inhibitors of the cytochrome P450 3A4 system the blood pressure should be monitored and, if necessary, a reduction in the nifedipine dose considered (see Sections 4.2 and 4.4). In the majority of these cases, no formal studies to assess the potential for a drug interaction between nifedipine and the drug(s) listed have been undertaken, thus far.

Drugs increasing nifedipine exposure:

- *macrolide antibiotics (e.g., erythromycin)*
- *anti-HIV protease inhibitors (e.g., ritonavir)*
- *azole anti-mycotics (e.g., ketoconazole)*
- *fluoxetine*
- *nefazodone*
- *quinupristin/dalfopristin*
- *cisapride*
- *valproic acid*
- *cimetidine*
- *diltiazem*

Upon co-administration of inducers of the cytochrome P450 3A4 system, the clinical response to nifedipine should be monitored and, if necessary, an increase in the nifedipine dose considered. If the dose of nifedipine is increased during co- administration of both drugs, a reduction of the nifedipine dose should be considered when the treatment is discontinued.

Increased plasma levels of nifedipine have been reported during concomitant use of alcohol, cyclosporin, ginkgo biloba and ginseng.

Enhanced hypotensive effect of nifedipine may occur with: aldesleukin, alprostadil, anaesthetics, antipsychotics, diuretics, phenothiazides, prazosin and intravenous ionic X-ray contrast medium. Profound hypotension has been reported with nifedipine and intravenous magnesium sulphate in the treatment of pre-eclampsia.

Drugs decreasing nifedipine exposure:

- *rifampicin (see above)*

- *phenytoin*
- *carbamazepine*
- *phenobarbital*

Decreased plasma levels of nifedipine have also been reported during concomitant use of St John's Wort.

#### Effects of nifedipine on other drugs

Nifedipine may increase the blood pressure lowering effect of concomitant applied antihypertensives.

When nifedipine is administered simultaneously with beta-receptor blockers the patient should be carefully monitored, since deterioration of heart failure is also known to develop in isolated cases.

*Digoxin:* The simultaneous administration of nifedipine and digoxin may lead to reduced digoxin clearance and, hence, an increase in the plasma digoxin level. The patient should therefore be subjected to precautionary checks for symptoms of digoxin overdosage and, if necessary, the glycoside dose should be reduced.

*Quinidine:* Co-administration of nifedipine with quinidine may lower plasma quinidine levels, and after discontinuation of nifedipine, a distinct increase in plasma quinidine levels may be observed in individual cases. Consequently, when nifedipine is either additionally administered or discontinued, monitoring of the quinidine plasma concentration, and if necessary, adjustment of the quinidine dose are recommended. Blood pressure should be carefully monitored and, if necessary, the dose of nifedipine should be decreased.

*Tacrolimus:* Tacrolimus is metabolised via the cytochrome P450 3A4 system. Published data indicate that the dose of tacrolimus administered simultaneously with nifedipine may be reduced in individual cases. Upon co-administration of both drugs, the tacrolimus plasma concentrations should be monitored and, if necessary, a reduction in the tacrolimus dose considered.

The plasma concentrations of phenytoin, theophylline, non-depolarising muscle relaxants (e.g. tubocurarine) are increased when used in combination with nifedipine.

There is an increased risk of excessive hypotension, bradycardia and heart failure with  $\beta$ -blockers.

Nifedipine may result in increased levels of mizolastine due to inhibition of cytochrome CYP3A4.

Nifedipine may increase the neuromuscular blocking effects of vecuronium.

#### Drug food interactions

Grapefruit juice inhibits the cytochrome P450 3A4 system. Administration of nifedipine together with grapefruit juice thus results in elevated plasma concentrations and prolonged action of nifedipine due to a decreased first pass metabolism or reduced clearance. As a consequence, the blood pressure lowering effect of nifedipine may be increased. After regular intake of grapefruit juice, this effect may last for at least three days after the last ingestion of grapefruit juice.

Ingestion of grapefruit/grapefruit juice is therefore to be avoided while taking nifedipine (see section 4.2).

#### Other forms of interaction

Nifedipine may increase the spectrophotometric values of urinary vanillylmandelic acid falsely. However, HPLC measurements are unaffected.

## **4.6 Fertility, Pregnancy and lactation**

### Pregnancy

Because animal studies show embryotoxicity and teratogenicity, Nifedipine is contra-indicated during pregnancy (see section 4.3). Embryotoxicity was noted at 6 to 20 times the maximum recommended dose for Nifedipine given to rats, mice and rabbits, and teratogenicity was noted in rabbits given 20 times the maximum recommended dose for Nifedipine. There are no adequate and well-controlled studies in pregnant women.

An increase in perinatal asphyxia, caesarean delivery as well as prematurity and

intrauterine growth retardation has been reported, however it is unclear whether these

reports are due to the underlying hypertension, its treatment or to a specific drug

effect. Acute pulmonary oedema has been observed when calcium channel blockers, among others nifedipine, have been used as a tocolytic agent during pregnancy (see section 4.8), especially in cases of multiple pregnancy (twins or more), with the intravenous route and/or concomitant use of beta-2 agonists.

### Breast-feeding

Nifedipine is excreted in the breast milk, therefore Nifedipine is not recommended during lactation (see section 4.4).

## Fertility

In single cases of *in vitro* fertilisation calcium antagonists like nifedipine have been associated with reversible biochemical changes in the spermatozoa's head section that may result in impaired sperm function. In those men who are repeatedly unsuccessful in fathering a child by *in vitro* fertilisation, and where no other explanation can be found, calcium antagonists like nifedipine should be considered as possible causes.

## **4.7 Effects on ability to drive and use machines**

Reactions to the drug, which vary in intensity from individual to individual, may impair the ability to drive or to operate machinery (see section 4.8). This applies particularly at the start of treatment, on changing the medication and in combination with alcohol.

Dizziness and lethargy are potential undesirable effects. If affected do not attempt to drive or use machinery (see section 4.8).

Excessive falls in blood pressure may result in transient blindness. If affected do not attempt to drive or use machinery (see section 4.8).

## **4.8 Undesirable effects**

Adverse drug reactions (ADRs) based on placebo-controlled studies with nifedipine sorted by CIOMS III categories of frequency (clinical trial data base: nifedipine n = 2,661; placebo n = 1,486; status: 22 Feb 2006 and the ACTION study: nifedipine n = 3,825; placebo n = 3,840) are listed below: ADRs listed under "common" were observed with a frequency below 3% with the exception of oedema (9.9%) and headache (3.9%).

The frequencies of ADRs reported with nifedipine-containing products are summarised in the table below. Within each frequency grouping, undesirable effects are presented in order of decreasing seriousness. Frequencies are defined as common ( $\geq 1/100$  to  $< 1/10$ ), uncommon ( $\geq 1/1,000$  to  $< 1/100$ ) and rare ( $\geq 1/10,000$  to  $< 1/1,000$ ). The ADRs identified only during the ongoing postmarketing surveillance, and for which a frequency could not be estimated, are listed under "Not known".

<b>System Organ Class (MedDRA)</b>	<b>Common</b>	<b>Uncommon</b>	<b>Rare</b>	<b>Not Known</b>

<b>Blood and Lymphatic System Disorders</b>				Agranulocytosis Leucopenia
<b>Immune System Disorders</b>		Allergic reaction  Allergic oedema / angioedema (incl. larynx oedema*)	Pruritus  Urticaria  Rash	Anaphylactic/ anaphylactoid reaction  Systemic allergic reactions
<b>Psychiatric Disorders</b>		Anxiety reactions  Sleep disorders	Mood changes	Depression
<b>Metabolism and Nutrition Disorders</b>				Hyperglycaemia
<b>Nervous System Disorders</b>	Headache	Vertigo  Migraine  Dizziness  Tremor	Par-/ Dysaesthesia	Hypoaesthesia  Somnolence  Lethargy  Cerebral ischemia (due to excessive fall in blood pressure)
<b>Eye Disorders</b>		Visual disturbances		Eye pain  Transient blindness (due to excessive fall in blood pressure)
<b>Cardiac Disorders</b>		Tachycardia  Palpitations		Chest pain  (Angina Pectoris)  Myocardial infarction <sup>1</sup>  Myocardial ischemia (due to excessive fall in blood pressure)
<b>Vascular Disorders</b>	Oedema (incl. peripheral)	Hypotension		Flushing

	oedema) Vasodilation	Syncope		
<b>Respiratory, Thoracic, and Mediastinal Disorders</b>		Nasal congestion Nosebleed		Dyspnoea Pulmonary Oedema**
<b>Gastrointestinal Disorders</b>	Constipation	Gastrointestinal and abdominal pain Nausea Dyspepsia Flatulence Dry mouth	Gingival hyperplasia	Vomiting Gastroesophageal sphincter insufficiency Diarrhoea
<b>Hepatobiliary Disorders</b>		Transient increase in liver enzymes		Jaundice Intra-hepatic cholestasis
<b>Skin and Subcutaneous Tissue Disorders</b>		Erythema		Toxic Epidermal Necrolysis Photosensitivity allergic reaction Palpable purpura Telangiectasia Erythema multiforme Pemphigoid reaction Exfoliative Dermatitis Purpura
<b>Musculoskeletal and Connective Tissue Disorders</b>		Muscle cramps Joint swelling		Arthralgia Myalgia Worsening of myasthenia gravis
<b>Renal and Urinary</b>		Polyuria		Increased frequency of

<b>Disorders</b>		Dysuria		micturition
<b>Reproductive System and Breast Disorders</b>		Erectile dysfunction		Gynaecomastia (long-term therapy)
<b>General Disorders and Administration Site Conditions</b>	Feeling unwell	Unspecific pain Chills		Fever

\* = may result in life-threatening outcome

\*\*cases have been reported when used as tocolytic during pregnancy (see section 4.6)

<sup>1</sup> = The occurrence of myocardial infarction has been described although it is not possible to distinguish such an event from the natural course of ischaemic heart disease.

In dialysis patients with malignant hypertension and hypovolaemia a distinct fall in blood pressure can occur as a result of vasodilation.

#### **Reporting of suspected adverse reactions**

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the Yellow Card Scheme at: [www.mhra.gov.uk/yellowcard](http://www.mhra.gov.uk/yellowcard) or search for MHRA Yellow Card in the Google Play or Apple App Store.

## **4.9 Overdose**

### *Symptoms*

Reports of nifedipine overdosage are limited and symptoms are not necessarily dose-related. Severe hypotension due to vasodilation, and tachycardia or bradycardia are the most likely manifestations of overdose.

Metabolic disturbances include hyperglycaemia, metabolic acidosis and hypo-  
or hyperkalaemia.

Cardiac effects may include heart block, AV dissociation and asystole, and cardiogenic shock with pulmonary oedema.

Other toxic effects include nausea, vomiting, drowsiness, dizziness, confusion, lethargy, flushing, hypoxia, unconsciousness and coma.

### *Treatment*

As far as treatment is concerned, elimination of nifedipine and the restoration of stable cardiovascular conditions have priority.

After oral ingestion, gastric lavage is indicated, if necessary in combination with irrigation of the small intestine. Ipecacuanha should be given to children.

Elimination must be as complete as possible, including the small intestine, to prevent the otherwise inevitable subsequent absorption of the active substance.

The benefit of gastric decontamination is uncertain.

1. Consider activated charcoal (50 g for adults, 1 g/kg for children) if the patient presents within 1 hour of ingestion of a potentially toxic amount.

Although it may seem reasonable to assume that late administration of activated charcoal may be beneficial for sustained release (SR, MR) preparations there is no evidence to support this.

2. Alternatively consider gastric lavage in adults within 1 hour of a potentially life-threatening overdose.

3. Consider further doses of activated charcoal every 4 hours if a clinically significant amount of a sustained release preparation has been ingested with a single dose of an osmotic laxative (e.g. sorbitol, lactulose or magnesium sulphate).

4. Asymptomatic patients should be observed for at least 4 hours after ingestion and for 12 hours if a sustained release preparation has been taken.

Haemodialysis serves no purpose as nifedipine is not dialyzable but plasmapheresis is advisable (high plasma protein binding, relatively low volume of distribution).

Blood pressure, ECG, central arterial pressure, pulmonary wedge pressure, urea and electrolytes should be monitored.

Hypotension as a result of cardiogenic shock and arterial vasodilation should be treated with elevation of the feet and plasma expanders. If these measures are ineffective, hypotension may be treated with 10% calcium gluconate 10-20 ml intravenously over 5-10 minutes. If the effects are inadequate, the treatment can be continued, with ECG monitoring. In addition, beta-sympathomimetics may be given, e.g. isoprenaline 0.2 mg slowly i.v. or as a continuous infusion of 5 µg/min. If an insufficient increase in blood pressure is achieved with calcium and isoprenaline, vasoconstricting sympathomimetics such as dopamine or noradrenaline should be administered. The dosage of these drugs should be determined by the patient's response.

Symptomatic bradycardia may be treated with atropine, beta-sympathomimetics or a temporary cardiac pacemaker, as required. Additional fluids should be administered with caution to avoid cardiac overload.

## **5 PHARMACOLOGICAL PROPERTIES**

### **5.1 Pharmacodynamic properties**

Pharmacotherapeutic group: selective calcium channel blockers with mainly vascular effect, dihydropyridine derivatives  
ATC code: C08CA05

Nifedipine is a specific and potent calcium antagonist of the 1, 4-dihydropyridine type. Calcium antagonists reduce the transmembranal influx of calcium ions through the slow calcium channel into the cell. Nifedipine acts particularly on the cells of the myocardium and the smooth muscle cells of the coronary arteries and the peripheral resistance vessels.

In hypertension, the main action of Nifedipine capsules is to relax arterial smooth muscle both in the coronary and peripheral circulation.

In angina pectoris, Nifedipine capsules reduces peripheral and coronary vascular resistance, leading to an increase in coronary bloody flow, cardiac output and stroke volume, whilst decreasing after-load.

Additionally, Nifedipine capsules dilate submaximally both clear and atherosclerotic coronary arteries, thus protecting the heart against coronary artery spasm and improving perfusion to the ischaemic myocardium.

Nifedipine capsules reduce the frequency of painful attacks and ischaemic ECG changes, irrespective of the relative contribution from coronary artery spasm or atherosclerosis.

Nifedipine capsules administered twice-daily provides 24-hour control of raised blood pressure. Nifedipine capsules causes reduction in blood pressure such that the percentage lowering is directly related to its initial level. In normotensive individuals, Nifedipine capsules have little or no effect on blood pressure.

Paediatric population:

Limited information on comparison of nifedipine with other antihypertensives is available for both acute hypertension and long-term hypertension with different formulations in different dosages. Antihypertensive effects of nifedipine have been

demonstrated but dose recommendations, long term safety and effect on cardiovascular outcome remain unestablished. Paediatric dosing forms are lacking.

## **5.2 Pharmacokinetic properties**

### Absorption

After oral administration nifedipine is almost completely absorbed. The systemic availability of orally administered nifedipine immediate release formulation (Nifedipine capsules) is 45 – 56 % owing to a first pass effect. Maximum plasma and serum concentrations are reached at 30 to 60 minutes. Simultaneous food intake leads to delayed, but not reduced absorption.

### Distribution

Nifedipine is about 95 % bound to plasma protein (albumin). The distribution half-life after intravenous administration has been determined to be 5 to 6 minutes.

### Biotransformation

After oral administration nifedipine is metabolized in the gut wall and in the liver, primarily by oxidative processes. These metabolites show no pharmacodynamic activity. Nifedipine is excreted in the form of its metabolites predominantly via the kidneys and about 5 – 15 % via the bile in the faeces. The unchanged substance is recovered only in traces (below 0.1 %) in the urine.

### Elimination

The terminal elimination half-life is 1.7 to 3.4 hours. No accumulation of the substance after the usual dose was reported during long-term treatment. In cases of impaired kidney function no substantial changes have been detected in comparison with healthy volunteers. In cases of impaired liver function the elimination half-life is distinctly prolonged and the total clearance is reduced. A dose reduction may be necessary in severe cases (see Section 4.4).

## **5.3 Preclinical safety data**

Preclinical data reveal no special hazard for humans based on conventional studies of single and repeated dose toxicity, genotoxicity and carcinogenic potential.

### *Reproduction toxicology*

Nifedipine has been shown to produce teratogenic findings in rats, mice and rabbits, including digital anomalies, malformation of the extremities, cleft palates, cleft sternum, and malformation of the ribs. Digital anomalies and malformation of the extremities are possibly a result of compromised uterine blood flow, but have also been observed in animals treated with nifedipine solely after the end of the organogenesis period.

Nifedipine administration was associated with a variety of embryotoxic, placentotoxic and foetotoxic effects, including stunted foetuses (rats, mice, rabbits), small placentas and underdeveloped chorionic villi (monkeys), embryonic and foetal deaths (rats, mice, rabbits) and prolonged pregnancy/decreased neonatal survival (rats; not evaluated in other species). The risk to humans cannot be ruled out if a sufficiently high systemic exposure is achieved, however, all of the doses associated with the teratogenic, embryotoxic or foetotoxic effects in animals were maternally toxic and were several times the recommended maximum dose for humans.

## **6 PHARMACEUTICAL PARTICULARS**

### **6.1 List of excipients**

Povidone, polysorbate 80, saccharin sodium, menthol, tetrahydrofurfuryl alcohol-polyethyleneglycol ether, gelatin, glycerol 85%, titanium dioxide (E171), Carmine Red (E120), purified water.

### **6.2 Incompatibilities**

None known

### **6.3 Shelf life**

36 months

### **6.4 Special precautions for storage**

Store below 25°C in a dry place. Protect from light.

### **6.5 Nature and contents of container**

Silver Opaque PvdC/PVC/aluminium foil blister strips.  
Pack sizes: 28, 30, 56, 60, 84, 90, 100, 112 and 120.

### **6.6 Special precautions for disposal**

Not applicable

## **7 MARKETING AUTHORISATION HOLDER**

Ennogen IP Ltd  
Unit G4,  
Riverside Industrial Estate,  
Riverside way,  
Dartford,  
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**8     MARKETING AUTHORISATION NUMBER(S)**

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5 October 1989 / 19 May 2012

**10    DATE OF REVISION OF THE TEXT**

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