SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE VETERINARY MEDICINAL PRODUCT

Revertor 5 mg/ml Solution for Injection for Dogs and Cats

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

1 ml solution for injection contains:

Active substance:
Atipamezole hydrochloride 5.0 mg
(equivalent to 4.27 mg atipamezole)

Excipient(s):
Methyl parahydroxybenzoate 1.0 mg

For a full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Solution for injection.
A clear colourless, sterile aqueous solution.

4. CLINICAL PARTICULARS

4.1 Target species

Dogs and Cats.

4.2 Indications for use, specifying the target species

Atipamezole hydrochloride is a selective α2-Antagonist and indicated for reversal of the sedative effects of medetomidine and dexmedetomidine in dogs and cats.

4.3 Contraindications

The product should not be used in:
- Breeding animals
- Animals suffering from liver- or renal diseases
See also section 4.7

4.4 Special warnings for each target species

None.

4.5 Special precautions for use

Special precautions for use in animals

After administration of the product, the animals should be allowed to rest in a quiet place. During recovery time animals should not be left unattended.

Due to different dosing recommendations caution should be taken if using the product off-label in animals other than the target species.
If other sedatives than medetomidine are given it must be kept in mind that the effects of those other agents may persist after reversal of (dex)medetomidine.
Atipamezole does not reverse the effect of ketamine, which may cause seizures in dogs and elicit cramps in cats when used alone. Do not use atipamezole earlier than 30-40 minutes after concomitant administration of ketamine.

Special precautions to be taken by the person administering the veterinary medicinal product to animals

Due to the potent pharmacological activity of atipamezole, skin–, eye- and mucous membrane- contact with this product should be avoided. In case of accidental spillage wash the affected area immediately with clean running water. Seek medical attention if irritation persists. Remove contaminated clothes that are in direct contact with the skin.
Care should be taken to avoid accidental ingestion or self-injection. If accidental ingestion or self-injection occurs, seek medical attention immediately, showing a copy of the package leaflet.

4.6 Adverse reactions (frequency and seriousness)

A transient hypotensive effect has been observed during the first 10 minutes post-injection of atipamezole hydrochloride. In rare cases hyperactivity, tachycardia, salivation, atypical vocalisation, muscle tremor, vomiting, increased respiratory rate, uncontrolled urination and uncontrolled defecation may occur. In very rare cases recurrence of sedation may occur or the recovery time may not be shortened after administration of atipamezole.

In cats, when using low doses to partially reverse the effects of medetomidine or dexmedetomidine, the possibility of hypothermia (even when aroused from sedation) should be guarded against.

4.7 Use during pregnancy, lactation or lay

As the use of atipamezole during pregnancy and lactation has not been documented adequately, it should not be used in pregnant or lactating animals.

4.8 Interaction with other medicinal products and other forms of interaction

A simultaneous administration of atipamezole with other centrally acting medicinal products as diazepam, acepromazine or opiates is not recommended.

4.9 Amounts to be administered and administration route

For single intramuscular injection.

Atipamezole hydrochloride is administered 15-60 min after medetomidine or dexmedetomidine hydrochloride administration.

Dogs: the intramuscular atipamezole hydrochloride dose [in µg] is five times that of the previous medetomidine hydrochloride dose or ten times that of the dexmedetomidine hydrochloride dose. Due to the 5-fold higher concentration of the active ingredient (atipamezole hydrochloride) in this product compared to that of preparations containing 1 mg medetomidine hydrochloride per ml and the 10-fold higher concentration compared to that of preparations containing 0.5 mg dexmedetomidine hydrochloride, an equal volume of each preparation is required.

Dosage example Dogs:

Medetomidine 1 mg/ml solution for injection dosage	**Revertor 5 mg/ml solution for injection for dogs dosage**
0,04 ml/kg body weight (bw), i.e. 40 µg/kg bw	0,04 ml/kg bw, i.e. 200 µg/kg bw
Dexmedetomidine 0.5 mg/ml solution for injection dosage	**Revertor 5 mg/ml solution for injection for dogs dosage**
0,04 ml/kg body weight (bw), i.e. 20 µg/kg bw	0,04 ml/kg bw, i.e. 200 µg/kg bw

Cats: the intramuscular atipamezole hydrochloride dose [in µg] is two-and-a-half times that of the previous medetomidine hydrochloride dose or five times that of the dexmedetomidine hydrochloride dose. Due to the 5-fold higher concentration of the active ingredient (atipamezole hydrochloride) in this product compared to that of preparations containing 1 mg medetomidine hydrochloride per ml and the 10-fold higher concentration compared to that of preparations containing 0.5 mg dexmedetomidine hydrochloride, half the volume of the product to that of the previously administered medetomidine or dexmedetomidine should be given.

Dosage example Cats:

Medetomidine 1 mg/ml solution for injection dosage	**Revertor 5 mg/ml solution for injection for cats dosage**
0,08 ml/kg body weight (bw), i.e. 80 µg/kg bw	0,04 ml/kg bw, i.e. 200 µg/kg bw
Dexmedetomidine 0.5 mg/ml solution for injection dosage	**Revertor 5 mg/ml solution for injection for cats dosage**
0,08 ml/kg body weight (bw), i.e. 40 µg/kg bw	0,04 ml/kg bw, i.e. 200 µg/kg bw

The recovery time is shortened to approximately 5 minutes. The animal becomes mobile after approximately 10 minutes after administration of the product.

4.10 Overdose (symptoms, emergency procedures, antidotes), if necessary

Overdose of atipamezole hydrochloride may result in transient tachycardia and over-alertness (hyperactivity, muscle tremor). If necessary, these symptoms may be reversed by a (dex)medetomidine hydrochloride dose which is lower than the usually used clinical dose.
If atipamezole hydrochloride is inadvertently administered to an animal not previously treated with (dex)medetomidine hydrochloride, hyperactivity and muscle tremor may occur. These effects may persist for about 15 minutes.
Over-alertness in the cat is best handled by minimising external stimuli.

4.11 Withdrawal period(s)

Not applicable.

5. PHARMACOLOGICAL PROPERTIES

ATCvet code: QV03AB90
Pharmacotherapeutic group: α2-receptor antagonist (Antidote)

5.1 Pharmacodynamic properties

Atipamezole is a potent and selective α2-receptor blocking agent (α2-antagonist), which promotes the release of the neurotransmitter noradrenaline in the central as well as in the peripheral nervous systems. This leads to activation of the central nervous system due to sympathetic activation. Other pharmacodynamic effects as for example influence of the cardiovascular system are only mild – but a transient decrease of blood pressure may be seen within the first 10 minutes after injection of atipamezole hydrochloride.
As a α2-antagonist, atipamezole is capable of eliminating (or inhibiting) the effects of the α2-receptor agonist, medetomidine or dexmedetomidine. Thus atipamezole reverses the sedative effects of (dex)medetomidine hydrochloride in dogs and cats to normal and may lead to a transient increase in heart rate.

5.2 Pharmacokinetic particulars

Atipamezole hydrochloride is rapidly absorbed after intramuscular injection. The maximal concentration in the central nervous system is reached in 10-15 minutes. Volume of distribution (V_d) is about 1 – 2.5 l/kg. The half-life ($t_{½}$) of atipamezole hydrochloride is reported to be approximately 1 hour. Atipamezole hydrochloride is rapidly and completely metabolised. The metabolites are mainly excreted in urine and in a small amount in faeces.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Methyl parahydroxybenzoate (E 218)
Sodium chloride
Hydrochloric acid (for pH-adjustment)
Sodium hydroxide (for pH-adjustment)
Water for Injections

6.2 Incompatibilities

In the absence of compatibility studies, this veterinary medicinal product must not be mixed with other veterinary medicinal products in the same syringe.
See also section 4.8.

6.3 Shelf life

Shelf-life of the veterinary medicinal product as packaged for sale: 3 years
Shelf-life after first opening the immediate packaging: 28 days

6.4. Special precautions for storage

Keep the vial in the outer carton.
Protect from light.

6.5 Nature and composition of immediate packaging

Clear glass (type I) vial with bromobutylrubber stopper (type I) secured with aluminium crimp caps containing 10 ml solution for injection.
Cardboard box with 1 vial containing 10 ml.
Cardboard box with 5 vials containing 10 ml
Cardboard box with 10 vials containing 10 ml

Not all pack sizes may be marketed.

6.6 Special precautions for the disposal of unused veterinary medicinal product or waste materials derived from the use of such products

Any unused product or waste materials should be disposed of in accordance with national requirements.

7. MARKETING AUTHORISATION HOLDER

CP-Pharma Handelsges. mbH
Ostlandring 13
DE - 31303 Burgdorf
Germany

8. MARKETING AUTHORISATION NUMBER(S)

400936.00.00

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

27 February 2007

10 DATE OF REVISION OF THE TEXT

PROHIBITION OF SALE, SUPPLY AND/OR USE
Not applicable.