

Buprenorphine HCl SR Injectable



General Information

ZooPharm can provide sustained release Buprenorphine HCl by prescription in a proprietary, patent pending, sustained release matrix. Buprenorphine SR releases over 72 hours to provide blood levels greater than 1 nanogram/ml for post operative analgesia in dogs and cats. The formulation can be injected subcutaneously through a 22 gauge needle.

Pharmacology and Chemistry

Buprenorphine is a thebaine derivative with powerful analgesia approximately twenty-five to forty times as potent as morphine, and its analgesic effect is due to partial agonist activity at μ -opioid receptors, i.e., when the molecule binds to a receptor, it is only partially activated in contrast to a full agonist such as morphine. Buprenorphine also has very high binding affinity for the μ receptor such that opioid receptor antagonists (e.g. naloxone) only partially reverse its effects.

Its chemical name is 17-(cyclopropylmethyl)-alpha-(1,1-dimethylethyl)-4,5-epoxy-18, 19-dihydro-3-hydroxy-6-methoxy-alpha-methyl-6,14-ethenomorphinan-7-methanol.

Pharmacokinetics

In an unpublished study, three dogs administered 270 ug/kg subcutaneously had plasma concentrations that rose rapidly reaching average Cmax of 2.14ng/ml at an average Tmax of 1 hour. Notably average plasma concentration remained over 1.0ng/ml from under 1 hour to over 72 hours post injection.

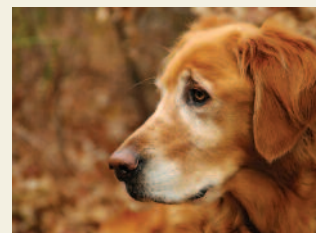
Contraindications and Precautions

Some patients may exhibit bradycardia and slight sedation associated with opiates. Veterinarians must rely on their professional knowledge and judgment when prescribing sustained release Buprenorphine.

Compounded Forms Possible

Buprenorphine hydrochloride is compounded by ZooPharm upon prescription at a concentration of 10 mg/ml in a 5 ml vial in a sustained release biodegradable matrix.

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