

Akten™
(lidocaine HCl
ophthalmic gel) 3.5%

A New Horizon in Ocular Anesthesia

3.5% Viscous Topical Ocular Anesthetic Gel Preservative Free

AKTEN™ FREQUENTLY ASKED QUESTIONS

What is Akten™?

Akten (lidocaine hydrochloride ophthalmic gel) 3.5%, is a prescription topical ocular anesthetic. It is the first FDA-approved ophthalmic gel anesthetic in an optimal 3.5% dose and is preservative free.

What are the features and benefits of Akten™?

- ▶ Onset of action between 20 to 60 seconds and persists for 5 to 30 minutes
- ▶ Viscous gel formulation for extended localized contact
- ▶ Only FDA-approved lidocaine available for ocular procedures
- ▶ Physiological pH: 5.5 to 7.5
- ▶ Store at room temperature: 15° to 25°C (59° to 77°F)
- ▶ Preservative free

What is Akten™ indicated for?

Akten™ is a local anesthetic indicated for ocular surface anesthesia during ophthalmologic procedures.

What procedures will use Akten™?

Any procedure where a topical anesthetic would be used including: prior to cataract surgery, intravitreal injections, refractive surgery including LASIK, supplemental topical anesthetic after peribulbar or retrobulbar block, contact lens exam of retina, ALT/SLT lasers, retinal lasers, retinal cryoretinopexy, pneumatic retinopexy, scleral depression examinations, conjunctival or corneal foreign body removal, gonioscopy, suture placement, removal of corneal sutures, removal of conjunctival sutures, removal of lid sutures, anterior chamber paracentesis, placement of electroretinographic lenses, lens placement for YAG laser, vitreous biopsy, conjunctival biopsies, minor lid procedures, pterygium surgery, strabismus adjustment surgery, conductive keratoplasty, pars plana vitrectomy, and trabeculectomy.

How is Akten™ administered?

The recommended dose of Akten™ is 2 drops applied to the ocular surface in the area of the planned procedure. Akten™ may be reapplied to maintain anesthetic effect.

What are the ingredients of Akten™?

Akten™ contains 35 mg of lidocaine hydrochloride per mL as the active ingredient. Akten™ also contains Hypromellose, Sodium Chloride, and Purified Water as inactive ingredients. The pH may be adjusted to 5.5

to 7.5 with Hydrochloric Acid and/or Sodium Hydroxide. Akten™ is preservative Free.

How is Akten™ packaged?

Akten™ is supplied in a single use 5mL/10cc in a clear plastic ophthalmic dropper bottle. It is sold in an eaches (1) and shrink wrapped in 12s. The NDC# is 17478-792-10.

Akten™ use in specific populations.

- ▶ Pregnancy – Reproduction studies for lidocaine have been performed in both rats and rabbits. There was no evidence of harm to the fetus at subcutaneous doses up to 50 mg/kg lidocaine (more than 800 fold greater than the human dose on a body weight basis) in the rat model. There are however, no adequate and well controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used in pregnancy only if clearly needed.
- ▶ Nursing Mothers – Lidocaine is secreted in human milk. The clinical significance of this observation is unknown. Although no systemic exposure is expected with administration of Akten™, caution should be exercised when Akten™ is administered to a nursing woman.
- ▶ Pediatric Use – Safety and efficacy in pediatric patients has been extrapolated from studies in older subjects and studies in pediatric patients using different formulations of lidocaine.
- ▶ Geriatric Use – No overall clinical differences in safety or effectiveness were observed between the elderly and other adult patients.

What important safety information should I know about Akten™?

Akten™ has no known contraindications. Most common adverse reactions are conjunctival hyperemia, corneal epithelial changes, headache, and burning upon instillation. To report SUSPECTED ADVERSE REACTIONS, contact Akorn at (1-800-932-5676 and www.Akorn.com) or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

What is the shelf life of Akten™?

Akten™ has a 24 month shelf life.

How should Akten™ be stored?

Store at 15° to 25° C (59° to 77° F). Keep container closed and protected from light in the original carton until use. Discard after use.

Akorn

Akten™ (lidocaine hydrochloride ophthalmic gel) 3.5%



NDC#	Description	Size	Unit of Sale
17478-792-10	Akten™ (lidocaine hydrochloride ophthalmic gel) 3.5%	5 mL	1

Each mL Contains:

Active:	35 mg of lidocaine hydrochloride;
Preservative:	None;
Inactives:	Hypromellose, Sodium Chloride, and Purified Water. The pH may be adjusted to 5.5 to 7.5 with Hydrochloric Acid and/or Sodium Hydroxide.

Wholesaler Order Entry Numbers

NDC	Cardinal	Amerisource	Bergen	McKesson	Morris Dickson
17478-792-10	4123287	5089149	575118	1444934	929489

Akten™ (lidocaine hydrochloride ophthalmic gel) 3.5%

FULL PRESCRIBING INFORMATION:

1 INDICATIONS AND USAGE

Akten™ is a local anesthetic indicated for ocular surface anesthesia during ophthalmologic procedures.

2 DOSAGE AND ADMINISTRATION

The recommended dose of Akten™ is 2 drops applied to the ocular surface in the area of the planned procedure. Akten™ may be reapplied to maintain anesthetic effect.

3 DOSAGE FORMS AND STRENGTHS

Akten™ Ophthalmic Gel, 3.5% contains 35 mg per mL of lidocaine hydrochloride for topical ophthalmic administration.

4 CONTRAINDICATIONS

None

5 WARNINGS AND PRECAUTIONS

- Not for injection.
- Corneal Opacification. Prolonged use of a topical ocular anesthetic may produce permanent corneal opacification and ulceration with accompanying visual loss.

6 ADVERSE REACTIONS

Most common adverse reactions are conjunctival hyperemia, corneal epithelial changes, headache, and burning upon instillation.

8 USE IN SPECIFIC POPULATIONS

8.1 Pregnancy. Pregnancy Category B.

Reproduction studies for lidocaine have been performed in both rats and rabbits. There was no evidence of harm to the fetus at subcutaneous doses up to 50 mg/kg lidocaine (more than 800 fold greater than the human dose on a body weight basis) in the rat model. There are, however, no adequate and well controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, this drug should be used in pregnancy only if clearly needed.

8.3 Nursing Mothers

Lidocaine is secreted in human milk. The clinical significance of this observation is unknown. Although no systemic exposure is expected with administration of Akten™, caution should be exercised when Akten™ is administered to a nursing woman.

8.4 Pediatric Use

Safety and efficacy in pediatric patients has been extrapolated from studies in older subjects and studies in pediatric patients using different formulations of lidocaine.

8.5 Geriatric Use

No overall clinical differences in safety or effectiveness were observed between the elderly and other adult patients.

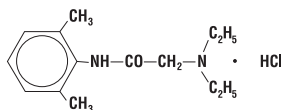
10 OVERDOSAGE

Prolonged use of a topical ocular anesthetic may produce permanent corneal opacification and ulceration with accompanying visual loss.

Acute emergencies from local anesthetics are generally related to high plasma levels encountered during therapeutic use of local anesthetics or to unintended subarachnoid injection of local anesthetic solution. However, topical ocular application of Akten™ is not expected to result in systemic exposure.

11 DESCRIPTION

Akten™ (lidocaine hydrochloride ophthalmic gel) 3.5% is a sterile, preservative-free, single patient use ophthalmic gel preparation for topical ocular anesthesia. Lidocaine hydrochloride is designated chemically as acetamide, 2-(diethylamino)-N-(2,6-dimethylphenyl) monohydrochloride with a molecular formula of C₁₄H₂₂N₂O HCl and molecular weight of 270.8. The structural formula of the active ingredient is:



Akten™ contains 35 mg of lidocaine hydrochloride per mL as the active ingredient. Akten™ also contains Hypromellose, Sodium Chloride, and Purified Water as inactive ingredients. The pH may be adjusted to 5.5 to 7.5 with Hydrochloric Acid and/or Sodium Hydroxide.

12 CLINICAL PHARMACOLOGY

12.1 Mechanism of Action

Akten™ is a local anesthetic agent that stabilizes the neuronal membrane by inhibiting the ionic fluxes required for the initiation and conduction of impulses, thereby effecting local anesthetic action. Anesthesia generally occurs between 20 seconds to 1 minute and persists for 5 to 30 minutes.

12.3 Pharmacokinetics

Lidocaine may be absorbed following topical administration to mucous membranes. Its rate and extent of absorption depend upon various factors such as concentration, the specific site of application, viscosity of the agent, and duration of exposure.

The plasma binding of lidocaine is dependent on drug concentration, and the fraction bound decreases with increasing concentration. At concentrations of 1 to 4 mcg of free base per mL, 60 to 80 percent of lidocaine is protein bound. Binding is also dependent on the plasma concentration of the alpha-1-acid glycoprotein.

Lidocaine is metabolized rapidly by the liver, and metabolites and unchanged drug are excreted by the kidneys. Biotransformation includes oxidative N-dealkylation, ring hydroxylation, cleavage of the amide linkage, and conjugation. N-dealkylation, a major pathway of biotransformation, yields the metabolites monoethylglycineylidide and glycineylidide. The pharmacologic/toxicologic actions of these metabolites are similar to, but less potent than, those of lidocaine. Approximately 90% of lidocaine administered is excreted in the form of various metabolites, and less than 10% is excreted unchanged. The primary metabolite in urine is a conjugate of 4-hydroxy-2, 6-dimethylaniline.

Studies of lidocaine metabolism following intravenous bolus injections have shown that the elimination half-life of this agent is typically 1.5 to 2 hours. Because of the rate at which lidocaine is metabolized, any condition that affects liver function may alter lidocaine kinetics. The half-life may be prolonged twofold or more in patients with liver dysfunction. Renal dysfunction does not affect lidocaine kinetics but may increase the accumulation of metabolites.

13 NONCLINICAL TOXICOLOGY

13.1 Carcinogenesis, Mutagenesis, Impairment of Fertility

Long-term studies in animals have not been performed to evaluate the carcinogenic potential of Akten™.

14 CLINICAL STUDIES

The effect of Akten™ on ocular anesthesia was studied in a multi-center, randomized, controlled, double-blind study.

A total of 209 subjects were enrolled, with 54, 51, 53, and 51 subjects randomized to the sham, Akten™ 1.5%, Akten™ 2.5%, and Akten™ 3.5% groups, respectively. Ocular anesthesia was achieved within 5 minutes of anesthetic application by 47 of 51 subjects (92%) in the Akten™ 3.5% group.

The mean time to anesthesia onset ranged from 20 seconds to 5 minutes and was not affected by Akten™ dose. The mean time to anesthesia onset was approximately 60 seconds, with a median onset time of 40 seconds for the Akten™ 3.5% group. Among the subjects in the Akten™ groups who achieved anesthesia within 5 minutes, approximately 90% had achieved anesthesia within 60 seconds of application.

The duration of anesthesia generally ranged from approximately 5 minutes to 30 minutes, with mean anesthesia durations of approximately 15 minutes for the Akten™ 3.5% group.

Approximately 84% of the subjects in the Akten™ 3.5% group experienced anesthesia for at least 5 minutes, approximately 55% of subjects experienced anesthesia for 10 minutes or longer and 27% experienced anesthesia for 15 minutes or longer. The anesthetic effect of additional applications of Akten™ has not been evaluated.

16 HOW SUPPLIED/STORAGE AND HANDLING

Akten™ (lidocaine hydrochloride ophthalmic gel) 3.5% is supplied as a clear gel for single patient use as follows:

5 mL fill in a 10 mL natural, round plastic dropper bottle (NDC 17478-792-10).

Storage

Store at 15° to 25°C (59° to 77°F)

Keep container closed and protected from light in the original carton until use. Discard after use.

Rx Only

Manufactured by:
Akorn Inc.
Lake Forest, IL 60045

U.S. Patent No.: 11/491,611 Pending
U.S. Patent No.: 11/745,207 Pending

AN00N Rev. 09/08



To order products call 800.932.5676 or fax 800.943.3694 • www.akorn.com/akten

1925 West Field Court, Suite 300 • Lake Forest, IL 60045 • 800.932.5676 • Fax 800.943.3694 • www.akorn.com/akten