

ADAPALENE TOPICAL SOLUTION- adapalene swab
Marnel Pharmaceuticals, Inc.

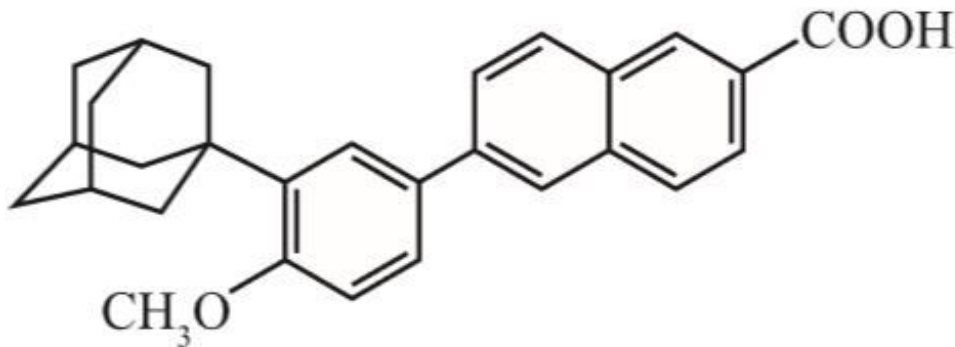
PLIXDA

(Adapalene)

Topical Solution, 0.1%

DESCRIPTION: Plixda™ (Adapalene) Topical Solution, 0.1%, containing adapalene is used for the topical treatment of acne vulgaris. Each mL of Plixda (Adapalene) Topical Solution, 0.1% contains 0.1% (1mg) in a vehicle consisting of polyethylene glycol 400 and alcohol, denatured, 30% (w/v).

The chemical name of adapalene is 6-[3-(1-adamantyl)-4-methoxyphenyl]-2-naphthoic acid. Adapalene is a white to off-white powder which is soluble in tetrahydrofuran, sparingly soluble in ethanol, and practically insoluble in water. The molecular formula is C₂₈H₂₈O₃ and the molecular weight is 412.52. Adapalene is represented by the following structural formula:



CLINICAL PHARMACOLOGY: Adapalene is a chemically stable, retinoid-like compound. Biochemical and pharmacological profile studies have demonstrated that adapalene is a modulator of cellular differentiation, keratinization, and inflammatory processes all of which represent important features in the pathology of acne vulgaris. Mechanistically, adapalene binds to specific retinoic acid nuclear receptors, but does not bind to the cytosolic receptor protein. Although the exact mode of action is unknown, it is suggested that topical adapalene may normalize the differentiation of follicular epithelial cells resulting in decreased microcomedone formation.

Pharmacokinetics: Absorption of adapalene through human skin is low. Only trace amounts (<0.25ng/mL) of parent substance have been found in the plasma of acne patients following chronic topical application of adapalene in controlled clinical trials. Excretion appears to be primarily by the biliary route.

INDICATIONS AND USAGE: Plixda (Adapalene) Topical Solution, 0.1% should not be administered to individuals who are hypersensitive to adapalene or any of the components in the vehicle solution.

WARNINGS: Use of Plixda (Adapalene) Topical Solution, 0.1% should be discontinued if hypersensitivity to any of the ingredients is noted. Patients with sunburn should be advised not to use the product until fully recovered.

PRECAUTIONS: General: If a reaction suggesting sensitivity or chemical irritation occurs, use of the medication should be discontinued. Exposure to sunlight, including sunlamps, should be minimized during the use of adapalene. Patients who normally experience high levels of sun exposure, and those with inherent sensitivity to sun, should be warned to exercise caution. Use of sunscreen products and protective clothing over treated areas is recommended when exposure cannot be avoided. Weather extremes, such as wind or cold, also may be irritating to patients under treatment with adapalene.

Avoid contact with the eyes, lips, angles of the nose, and mucous membranes. The product should not be applied to cuts, abrasions, eczematous skin, or sunburned skin.

Certain cutaneous signs and symptoms such as erythema, dryness, scaling, burning or pruritus may be experienced during treatment. These are most likely to occur during the first two to four weeks and will usually lessen with continued use of the medication. Depending upon the severity of adverse events, patients should be instructed to reduce the frequency of application or discontinue use.

Drug Interactions: As Plixdea (Adapalene) Topical Solution, 0.1% has the potential to produce local irritation in some patients, concomitant use of other potentially irritating topical products (medicated or abrasive soaps and cleansers, soaps and cosmetics that have a strong drying effect, and products with high concentrations of alcohols, astringents, spices or lime) should be approached with caution. Particular caution should be exercised in using preparations containing sulfur, resorcinol, or salicylic acid in combination with Plixda (Adapalene) Topical Solution, 0.1%. If these preparations have been used, it is advisable not to start therapy with Plixda (Adapalene) Topical Solution, 0.1% until the effect of such preparations in the skin have subsided.

Carcinogenesis, Mutagenesis, Impairment of Fertility: Carcinogenicity studies with adapalene have been conducted in mice at topical doses of 0.3, 0.9, and 2.6 mg/kg/day and in rats at oral doses of 0.15, 0.5, and 1.5mg/kg/day, approximately 4-75 times the maximal daily human topical dose. In the oral study, positive linear trends were observed in the incidence of follicular cell adenomas and carcinomas in the thyroid glands of female rats, and in the incidence of benign and malignant pheochromocytomas in the adrenal medullas of male rats.

No photocarcinogenicity studies were conducted. Animal studies have shown an increased tumorigenic risk with the use of pharmacologically similar drugs, (e.g. retinoids) when exposed to UV irradiation in the laboratory or to sunlight. Although the significance of these studies in humans is not clear, patients should be advised to avoid or minimize exposure to either sunlight or artificial UV irradiation sources.

In a series of *in vivo* and *in vitro* studies, adapalene did not exhibit mutagenic or genotoxic activities.

Pregnancy: Teratogenic effect. Pregnancy Category C. No teratogenic effects were seen in rats at oral doses of adapalene 0.15 to 5.0 mg/kg/day, up to 120 times the maximal daily human topical dose. Cutaneous route teratology studies conducted in rats and rabbits at doses of 0.6, 2.0, and 6.0 mg/kg/day, up to 150 times the maximal daily human topical dose exhibited no fetotoxicity and only minimal increases in supernumerary ribs in rats. There are no adequate well-controlled studies in pregnant women. Adapalene should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Nursing Mothers: It is not known whether this drug is excreted in human milk. Because many drugs are excreted in human milk, caution should be exercised when Plixda (Adapalene) Topical Solution, 0.1% is administered to a nursing woman.

Pediatric Use: Safety and effectiveness in pediatric patients below the age of 12 have not been established.

ADVERSE REACTIONS: Some adverse effects such as erythema, scaling, dryness, pruritus, and burning will occur in 30-60% of patients. Pruritus or burning immediately after application also occurs in approximately 30% of patients. The following additional adverse experiences were reported in approximately 1% or less of patients: skin irritation, burning/stinging, erythema, sunburn, and acne flares. These are most commonly seen during the first month of therapy and decrease in frequency and severity thereafter. All adverse effects with the use of adapalene solution during clinical trials were reversible upon discontinuation of therapy.

To report **SUSPECTED ADVERSE REACTIONS**, contact Marnel Pharmaceuticals LLC at **1-888-850-2905** or **FDA at 1-800-FDA-1088** or **www.fda.gov/medwatch**.

OVERDOSAGE: Plixda (Adapalene) Topical Solution, 0.1% is intended for cutaneous use only. If the medication is applied excessively, no more rapid or better results will be obtained and marked

redness, peeling, or discomfort may occur. The acute oral toxicity of Plixda (Adapalene) Topical Solution, 0.1% in mice and rats is greater than 10 mL/kg. Chronic ingestion of the drug may lead to the same side effects as those associated with excessive oral intake of Vitamin A.

DOSAGE AND ADMINISTRATION:

1. Remove swab from foil just before using. Plixda (Adapalene) Topical Solution, 0.1% should be applied once a day to affected areas.
2. Before retiring in the evening, wash and dry areas to be treated.
3. Apply a thin film of medication to the affected areas. Avoid the eyes, lips, and mucous membranes.
4. Discard swab after single use. Do not use if seal is broken.

During the early weeks of therapy, an apparent exacerbation of acne may occur. This is due to the action of the medication on previously unseen lesions and should not be considered a reason to discontinue therapy. Therapeutic results should be noticed after eight to twelve weeks of treatment.

HOW SUPPLIED:

Plixda (Adapalene) Topical Solution, 0.1% is supplied in the following size:

30-count unit-of-use 1.2g swab - NDC 0682-0053-30

14-count unit-of-use 1.2g swab - NDC 0682-0053-14

<p>Contains 14 Swabs</p> <p>Marnel Pharmaceuticals</p> <p>(Adapalene) Topical Solution, 0.1% For External Use Only • Avoid Contact With Eyes</p> <p>Plixda™</p> <p>NDC 0682-0053-14 Rx Only</p>	<p>USUAL DOSAGE: See package insert for complete information.</p> <p>DIRECTIONS:</p> <ol style="list-style-type: none"> 1. Remove swab from foil just before using. Plixda™ (Adapalene) Solution should be applied once a day to affected areas. 2. Before retiring in the evening, wash and dry areas to be treated. 3. Apply a thin film of medication to the affected areas. Avoid eyes, lips, and mucous membranes. 4. Discard swab after single use. Do not use if seal is broken. <p>Each mL of Plixda (Adapalene) Topical Solution, 0.1% contains 0.1% (1mg) in a vehicle consisting of polyethylene glycol 400 and alcohol, deaerated, 30% (w/v).</p> <p>Store at 20°C to 25°C (68°F to 77°F), excursions permitted between 15°C and 30°C (between 59°F and 86°F).</p>	<p>Contains 14 Swabs</p> <p>Marnel Pharmaceuticals</p> <p>(Adapalene) Topical Solution, 0.1% For External Use Only • Avoid Contact With Eyes</p> <p>Plixda™</p> <p>NDC 0682-0053-14 Rx Only</p> <p>3 06820 05314 2</p>	<p>FOR EXTERNAL USE ONLY. AVOID CONTACT WITH EYES.</p> <p>KEEP THIS AND ALL MEDICATIONS OUT OF REACH OF CHILDREN. Use of Plixda (Adapalene) Topical Solution, 0.1% should be discontinued if hypersensitivity to any of the ingredients is noted. Patients with sunburn should be advised not to use the product until fully recovered.</p> <p>Manufactured for: MARNEL PHARMACEUTICALS LLC Charleston, SC 29403 1-888-850-2905 www.PlixdaDerm.com</p> <p>01/19</p>
<p>Contains 30 Swabs</p> <p>Marnel Pharmaceuticals</p> <p>(Adapalene) Topical Solution, 0.1% For External Use Only • Avoid Contact With Eyes</p> <p>Plixda™</p> <p>NDC 0682-0053-30 Rx Only</p>	<p>USUAL DOSAGE: See package insert for complete prescribing information.</p> <p>DIRECTIONS:</p> <ol style="list-style-type: none"> 1. Remove swab from foil just before using. Plixda™ (Adapalene) Solution should be applied once a day to affected areas. 2. Before retiring in the evening, wash and dry areas to be treated. 3. Apply a thin film of medication to the affected areas. Avoid eyes, lips, and mucous membranes. 4. Discard swab after single use. Do not use if seal is broken. <p>Each mL of Plixda (Adapalene) Topical Solution, 0.1% contains 0.1% (1mg) in a vehicle consisting of polyethylene glycol 400 and alcohol, deaerated, 30% (w/v).</p> <p>Store at 20°C to 25°C (68°F to 77°F), excursions permitted between 15°C and 30°C (between 59°F and 86°F).</p>	<p>Contains 30 Swabs</p> <p>Marnel Pharmaceuticals</p> <p>(Adapalene) Topical Solution, 0.1% For External Use Only • Avoid Contact With Eyes</p> <p>Plixda™</p> <p>NDC 0682-0053-30 Rx Only</p> <p>3 06820 05330 2</p>	<p>FOR EXTERNAL USE ONLY. AVOID CONTACT WITH EYES.</p> <p>KEEP THIS AND ALL MEDICATIONS OUT OF REACH OF CHILDREN. Use of Plixda (Adapalene) Topical Solution, 0.1% should be discontinued if hypersensitivity to any of the ingredients is noted. Patients with sunburn should be advised not to use the product until fully recovered.</p> <p>Manufactured for: MARNEL PHARMACEUTICALS LLC Charleston, SC 29403 1-888-850-2905 www.PlixdaDerm.com</p> <p>07/18</p>

ADAPALENE TOPICAL SOLUTION

adapalene swab

Product Information

Product Type	HUMAN PRESCRIPTION DRUG	Item Code (Source)	NDC:0682-0053
Route of Administration	TOPICAL		

Active Ingredient/Active Moiety

Ingredient Name	Basis of Strength	Strength
ADAPALENE (UNII: 1L4806J2QF) (ADAPALENE - UNII:1L4806J2QF)	ADAPALENE	1 mg in 1 mL

Inactive Ingredients

Ingredient Name	Strength
POLYETHYLENE GLYCOL 400 (UNII: B697894SGQ)	
ALCOHOL (UNII: 3K9958V90M)	

Packaging

#	Item Code	Package Description	Marketing Start Date	Marketing End Date
1	NDC:0682-0053-30	30 in 1 CARTON	08/27/2018	
1		1.2 mL in 1 POUCH; Type 0: Not a Combination Product		
2	NDC:0682-0053-14	14 in 1 CARTON	01/25/2019	
2		1.2 mL in 1 POUCH; Type 0: Not a Combination Product		

Marketing Information

Marketing Category	Application Number or Monograph Citation	Marketing Start Date	Marketing End Date
ANDA	ANDA204593	08/27/2018	

Labeler - Marnel Pharmaceuticals, Inc. (080161449)**Registrant** - Marnel Pharmaceuticals, Inc. (080161449)**Establishment**

Name	Address	ID/FEI	Business Operations
Ei Solution Works		105803274	manufacture(0682-0053) , pack(0682-0053)

Revised: 1/2019

Marnel Pharmaceuticals, Inc.