

Epi-On

Solution to
Flake Free and
Healthy Scalp

A novel cosmetic ingredient to anti-flaking



Epi-On

INCI Declaration

Azelamidopropyl Dimethyl
Amine (and) Water (and)
Butylene Glycol

Benefits

- Prevent the appearance of dandruff in just 7 days
- Soothing and restoring healthy scalp homeostasis
- Reduce excessive sebum secretion
- Inhibit Malassezia spp. growth and proliferation
- Anti-inflammation

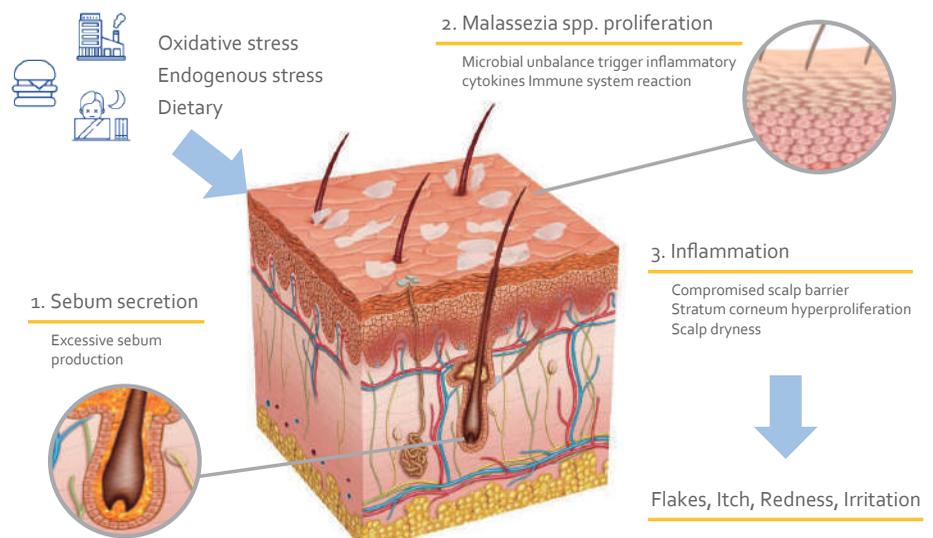
Applications

- Scalp cleansing / scrub
- Shampoo / conditioner / hair mask
- Anti-dandruff serum / toner / spray

Epi-On™ is a new patented active which effectively prevents the appearance of flakes on scalp in just 7 days by reducing excessive sebum secretion, inhibiting *Malassezia* spp. proliferation and anti-inflammation. It is a safe and non-irritating cosmetic ingredient for preventing flakes formation and restoring scalp homeostasis.

Dandruff Formation

Dandruff is formed by the aging and exfoliation of keratinocytes on the surface of the scalp. General skin metabolism will have a stable metabolic cycle. Healthy skin will experience growth, keratinization, death and shedding. Therefore, dandruff is a common condition that causes the skin on the scalp to flake. Dandruff is sometimes a warning for scalp health. For example: oxidative stress, endogenous stress, dietary might cause dandruff formation.



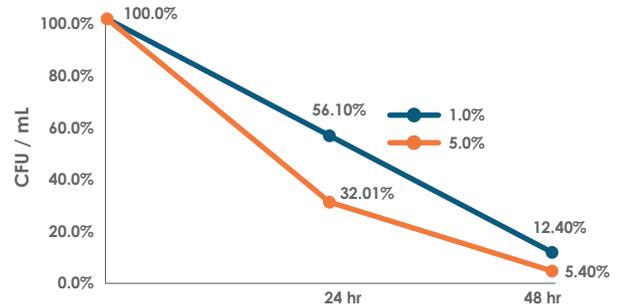
Epi-On

Efficacy Study

1

Epi-On™ Inhibits Amount of Malassezia spp. Growth and Proliferation.

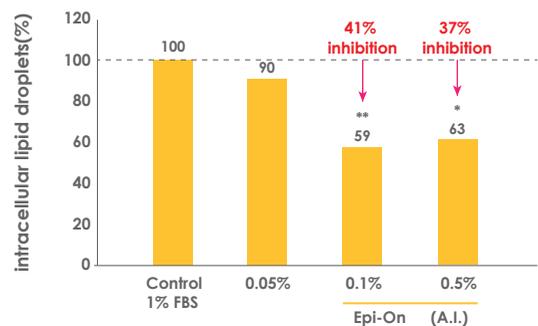
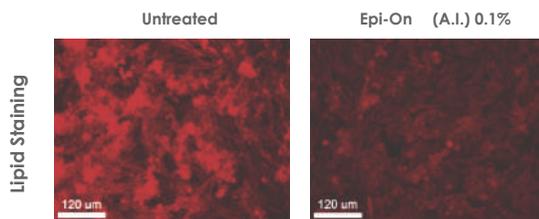
Malassezia spp. is the main reason causing most skin disease in humans, including dandruff and seborrhoeic dermatitis (inflammation and pathogenicity). The secretion of lipase on scalp provides nutrients to Malassezia spp. for its growth and proliferation. Our data shows that increasing concentration of Epi-On inhibits amount of Malassezia furfur within 48 hours.



2

Epi-On™ Inhibits Lipid Droplet in Sebocytes.

Sebocytes are sebum-producing epithelial cells that gradually accumulate lipid droplets and eventually release sebum to reach the skin surface via the hair canal. Lipid droplets are independent organelles that constituted by neutral lipids and are important for energy homeostasis within the cytoplasm. However, excessive lipid droplets may lead to cell dysfunction and have a negative impact on skin. Our results have realized Epi-On significantly decreases the content level of lipid droplets in a dose-dependent manner to impart a good ability of oil control.



3

Epi-On™ Inhibits ROS Generation and Gene Expression of COX-2.

Epi-On was further investigated its ability to inhibit the ROS generation and gene expression of COX-2. The table results on the right show Epi-On imparts excellent ability to inhibit ROS generation and the gene expression of COX-2.

Cell type NHEK	0.5% Epi-On (A.I.)	
Test Level	0.05%	0.5%
ROS	↓ 20%	↓ 32%
COX-2	↓ 31%	-

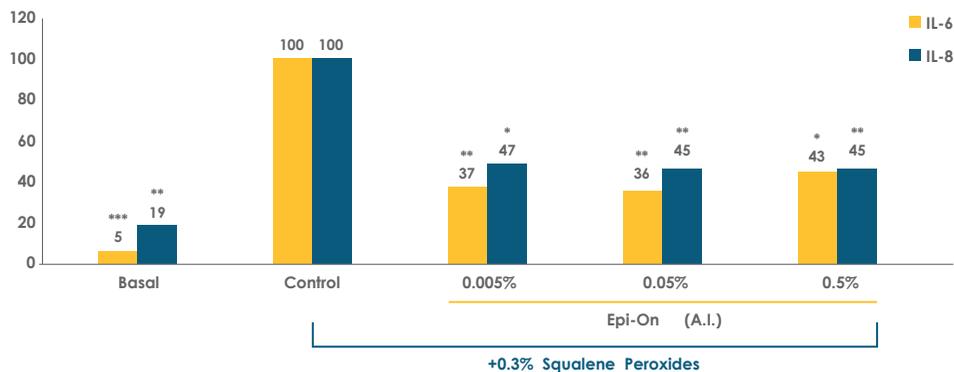
Epi-On

Efficacy Study

4

Epi-On™ Attenuates Inflammatory Reaction.

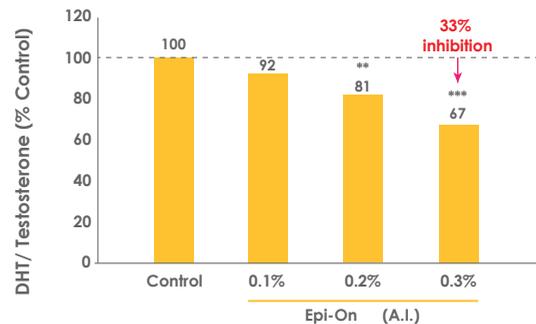
The anti-inflammatory property of Epi-On™ was investigated by measuring the protein levels of two cytokines IL-6 and IL-8, which mainly cause inflammatory responses, on HaCaT cell line. We use squalene peroxides as stimulant before treating with Epi-On™ in different dose. The data shows Epi-On™ downregulates inflammatory cytokines IL-6 and IL-8.



5

Epi-On™ Inhibits 5-α Reductase Activity.

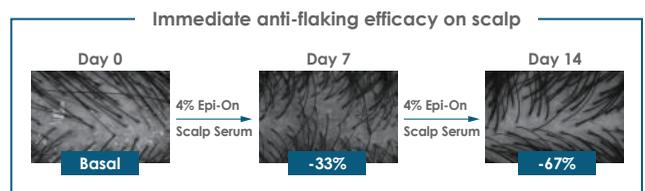
The conversion of testosterone to dihydrotestosterone (DHT) by the enzyme 5-α reductase is an important enzymatic process involved in androgen activity, and the high level of androgens causes an increase in sebum production. An in-vitro study, conducted by lab BioAlternative (France), shows that Epi-On imparts inhibitory effects on 5-α reductase activity and thus lowers the DHT/Testosterone ratio in a dose-dependent manner.



6

In-Vivo Study : Anti-flaking and Anti-redness Efficacy on Scalp.

28-day and 14-day in-vivo study were conducted by Intertek China, recruiting 44 volunteers (13 males/31 females) and 13 volunteers (1 males/12 females) respectively. The efficacy on inflammation (redness) and immediate dandruff regulating were observed with applications of 4% Epi-On in healthy Asian subjects. Based on the study results, 4% Epi-On can reduce inflammation (redness) and flaking on scalp. The effectiveness appears as soon as in 7 days.



Epi-On

A novel cosmetic ingredient to anti-flaking

Claim Ideas for Epi-On™

- Prevent the appearance of dandruff in just 7 days
- Soothing and restoring healthy scalp homeostasis
- Reduce excessive sebum secretion
- Inhibit Malassezia spp. growth and proliferation
- Anti-inflammation

Applications

- Scalp cleansing / scrub
- Shampoo / conditioner / hair mask
- Anti-dandruff serum / toner / spray

Marketing Benefits

- Excellent water solubility
- Excellent chemical stability
- Compatible with cosmetic ingredients
- Non-irritant, non-mutagenic, and non-toxic
- Patented & Halal approved



CORUM

6F, No. 360, Rwei Guang Rd., Neihu, Taipei, Taiwan
Tel: 886-2- 87516060 | Fax: 886-2- 87516363
sales@corum.com.tw | www.corum.com.tw