

**Keyprogen Co.,Ltd**

VentureTown Jangyoungsil  
404, 105, Sinildong-ro,  
Daedeok-gu, Daejeon  
34324, South Korea  
Tel:+82-42-861-7184  
Fax:+82-42-861-7189  
[www.keyprogen.com](http://www.keyprogen.com)

## Specification and Certification of analysis of EWG-EGF Liposome

Product Name : EWG-EGF Liposome, 10 ppm

Product No. : EWG-CS01-PG-001

Lot No. : PCSG2-21092301

Manufacturing Date : 2021.09.23.

Testing Date : 2021.09.23.

Expiration date : 2023.09.22.

Item	Specification	Results
Trade name	EWG-EGF Liposome (EWG grade - epidermal growth factor) Liposome	
INCI name	sh-Oligopeptide-1, Hydrogenated Lecithin, Butylene Glycol, Water, Disodium EDTA, Sodium Palmitoyl Sarcosinate, Caprylic/Capric Triglyceride, 1,2-Hexanediol	
Appearance	Liquid, white ~ Ivory color	pass
Odor	Typical	Typical
pH	6.5 ~ 8.5	7.12
Refractive Index(20℃)	1.330 – 1.411	1.347
Heavy Metals	< 10 ppm	pass

Microbes		
-Total bacteria count	< 100 cfu/ml	pass
-Yeast & molds	< 100 cfu/ml	pass

**Protein product notices**

1. All of the protein products at the various biological and non-biological environment are extremely unstable substances.
2. If you do not open the freeze-dried powder form, the product is recommended for storage at -70 degrees (2 years stable) or -20 degrees (stable for more than one year). On the other hand, the keeping at other temperature may occur with the loss of biological activity and degradation of protein.
3. Protein solutions are distributed at cold storage (4 degrees or less) to be protected the biologically active and degradation. Even during cold storage over time, depending on the characteristics of each of the protein degradation and precipitation may occur. Head office in these matters is not responsible after delivery.
4. Protein liposome solution can be used stably for 2 year if stored in a cool place (8°C ~ 25°C) away from direct sunlight.
5. Because of unexpected problems of the protein degradation and their inactivation in the process of distribution, you can not be detected protein content from solution. Head office in these matters is not responsible after delivery.
6. All protein products of the final product that is used as raw material in the manufacturing process by heating and a variety of environmental factors can be rapidly decomposed or lost activity. If the content of this protein could not be detected, and after the delivery of these matters is not responsible for the head office.

Approved by



Moonsun Ham (sign)

Protein engineering Lab/Chief Executive Officer

