

Based on Multiplex Gene Target Core Technology DOWGENE Bioinnovation Company

DOWGENE Leading company in K-Bio

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DowGene seeks to contribute to the healthy and happy lives of humanity by developing products that can diagnose and predict diseases based on multiplex PCR technology used for DNA identification.

Animal DNA Test

Porcine DNA Test Canine DNA Test Equine DNA Test Food Foreign Materials DNA Test

ene Sensing Analysis

Species Specific DNA Test

Molecular Diagosis

Production of in vitro diagno medical devices Simple quick diagnosis kits Cancer diagnosis kits Vegan Animal Verification DNA Test

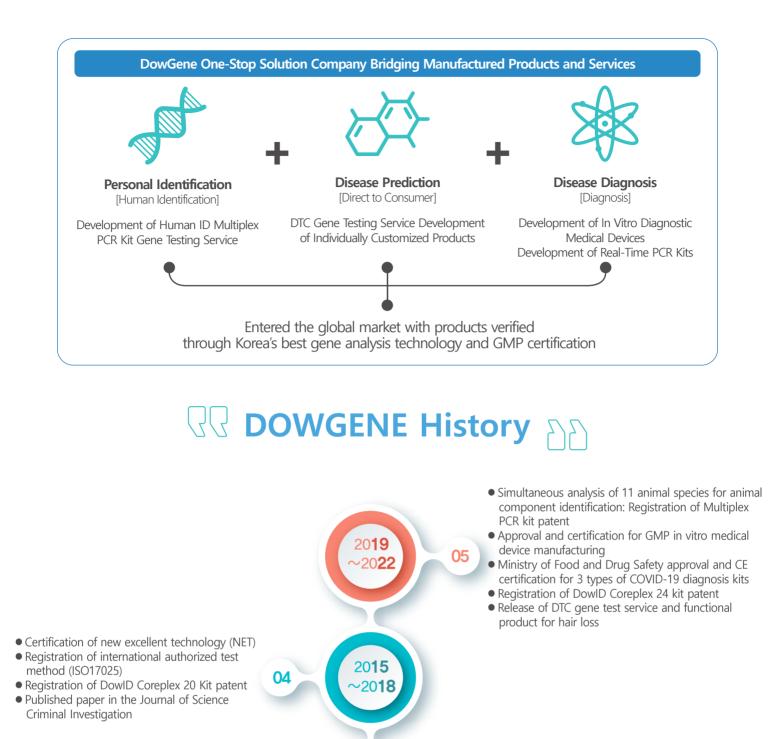
General Products Sales

Dr. BeBe DNA Test Our Family Protection Kit CSI Scientific Investigation Kit DOOPIEMONG Shampoo & Conditioner DTC DNA Test

DowGene Dr.Care DNA Test DowGene Dr.Care DNA Test Healthy DowGene Dr.Care DNA Test Beauty

Human DNA Test

Blood Relation Gene Testing dentification Gene Testing Cremains Gene Testing



20**10**

-2014

2006

-20**09**

20**02**

2005

02

 Certification from KOLAS, international authorization test institute (2009 - 2022)

by Ministry of Health and Welfare

(2007 - 2022)

• Selected as Grade A DNA testing organization

03

01

- Selected as a consignment business for gene testing by the Korean National Police Agency (2006 - 2014)
- Selected by the Ministry of Unification for a DNA testing and collection project for separated families (2014 - 2016, 2018 - 2022)

• Selected as a consignment business by the Ministry of National Defense for DNA testing of the bereaved from the Korean War (2010, 2012, and 2021)

Company establishment (2002)
 Gene testing service and product manufacturing

DOWGENE Business Area

DowGene is a leading company in the K-Bio industry, recognized worldwide for developing and selling gene testing services.

Our offerings include DNA profile testing, DNA testing for foreign material in food, direct-to-consumer (DTC) health management tests, disease diagnosis kits, and other DNA analysis-related products.

DOWGENE BUSINESS Core Business



DOWGENE SERVICE AREA DNA Testing Service

Human DNA Test

- 1. Blood Relation Gene Testing
 - Paternity DNA Test A-STR
 - Mitochondria DNA Test mtDNA
 - ► Y Chromosome DNA Test -Y-STR
 - ► X Chromosome DNA Test X-STR
- 2. Identification DNA Test
- 3. Bone DNA Test

Animal DNA Test

- 1. Bovine DNA test and paternity test
- 2. Porcine DNA test and paternity test
- 3. Canine DNA test and paternity test
- 4. Equine DNA test and paternity test

Direct To Consumer (DTC) Gene Testing

- 1. DowGene Dr.Care DNA Test
 - ▶ DowGene Dr.Care DNA Test Healthy
 - ► DowGene Dr.Care DNA Test Beauty

Etc.

- 1. Foreign Food Materials DNA Test
- 2. Species Specific DNA Test
- 3. Species-Specific DNA Test for 11 Animal Species
- 4. Vegan Certification Animal DNA Test
- 5. Halal Certification DNA Test

DOWGENE SERVICE AREA R&D Projects Business

Products and Technology R&D

- 1. Development of DNA identification field products
- 2. Development of in vitro medical device field products
- 3. Development of Halal certification products
- 4. Development of bio-research field products

Research on customer customization

- 1. Research on customized bio-products
- 2. Research of Molecular Diagnostic Products

Collaboration research with industry, academia, and relevant organizations

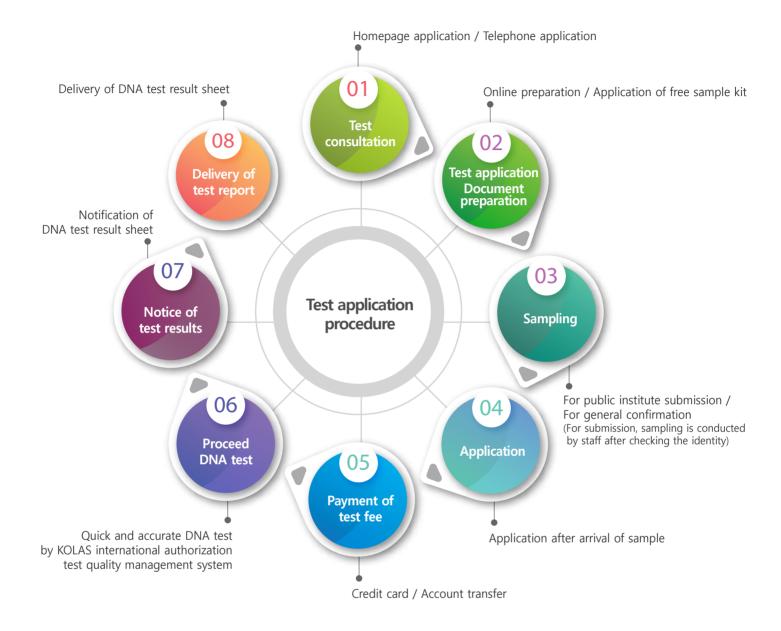
- 1. Development of source technology
- 2. Development of DNA identification technology
- 3. Acquisition of new core technology & idea

Other analysis services

- 1. Halal certification test
- 2. Animal verification test
- 3. Species specific test
- 4. Vegan certification test



DOWGENE SERVICE AREA **DNA Testing Service Application**



> Test application method

Application on DowGene homepage / www.dowgene.com Operation of consultation Call Center / +82 • 1566 • 3313

Payment Method

Kookmin Bank / 535501-04-008699 / Account holder: DowGene Co., Ltd.

DOWGENE **Product Descriptions**

Superiority of DowGene's Technology Development

I. Korea's first DNA analysis reagent for DNA identification (DowID Coreplex 20 & 24 Kit) DNA testing service through localization

- Publication of paper in Korean Journal of Forensic Science
- Registration of KOLAS international authorized test method
- Providing gene tests with the best accuracy in Korea (99.999% or higher) through the analysis of 31 genetic markers (the largest in Korea)!
- Strengthened service competitiveness due to cost reduction through localization of analysis reagent for DNA identification

II. Development of the world's first hair loss-predicting DNA analysis,

DOW Hair Loss QuickFinder Kit

- Multiplex PCR Kit that simultaneously analyzes 20 hair loss-related genes
- Patent registration of hair loss-predicting DNA analysis, DOW Hair Loss QuickFinder Kit
- Effectiveness of Scientifically Accurate Methods for Hair Loss Prevention

I. Sales of DTC gene tests and related products

- Accurate DTC gene testing service with 43 SNP analysis of 11 items
- Sales of health-related DTC gene testing service products
- ▶ Expansion of DTC gene testing with 72 items and shopping mall platform construction project

IV. K certification of COVID-19 in vitro diagnosis medical device brand

- Development of 3 types of COVID-19 diagnosis kits
- KFDA, Saudi Arabia SFDA, CE certification
- ISO 13485 Certification
- GMP Certification

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Human Identification Kit	Human Diagnosis Detection Kit	Animal Identification Kit
<image/>	<image/>	 Dow Animal Species Power Aniplex Kit Dow mtQuickFinder Equine Kit Dow Aniplex 18-Porcine Kit
DNA Extraction Products	PCR-Related Products	Gene Collection Products
<image/> <list-item><list-item><list-item><list-item><list-item><list-item></list-item></list-item></list-item></list-item></list-item></list-item>	 PCR Purification Kit Pow Premium One-step RT qPCR Kit Dow Mega Amp® Hot Start Taq Polymerase Dow Mega Amp® Hot Start PCR Premix 	 DowGeneCard I (blood and body fluid collection kit) DowGeneCard II (hair collection kit) DowGeneCard III (kit simultaneously collecting blood, body fluid, and hair)
Real time PCR products	Other products	Other products
 Dow QuickFinder™ 2019-nCoV Real time PCR Kit Dow QuickFinder™-G 2019-nCoV Real time PCR Kit Dow NETPlex™ SARS-CoV-2 RT-PCR Kit 	 Our Family Protection Kit Osl Scientific Investigation Kit CSI Scientific Investigation Unit DOOPIEMONG shampoo & conditioner for hair loss prevention 	 Pr. BeBe DNA seal Missing children prevention DNA & fingerprint collection kit DNA ID card

DOWGENE Product **DL CELLASOME**

DL Cellasome Gene Scalp Hair Solution Kit

DL CELLASOME Gene Scalp Hair Solution is created using the first vaccine-producing LNP technology in Korea, based on the hair loss gene analysis technology developed by DowGene, a company with several years of hair loss research and extensive gene analysis know-how.

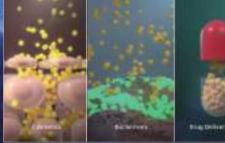
Five patented active ingredients are encapsulated in nano capsules to deliver these active ingredients deeply into scalp cells, resulting in excellent anti-hair loss effects.

DL CELLASOME, created with vaccine-producing LNP nano capsule technology with proven functionality unlike other existing liposome or exosome technology!





Uniform and small LNPs with high LNP concentration





High lipid concentration

DOWGENE Product DL Cellasome Gene Scalp Ampoule

Anti-hair loss functional cosmetics

The DL CELLASOME Gene Scalp Ampoule contains five patented active ingredients in nano capsules and offers a significant effect against hair loss. It is made with the most advanced vaccine-producing LNP technology, which allows deep penetration of active ingredients into the scalp's dermal layer.

This expert solution eliminates the fundamental cause of hair loss and improves the scalp environment for a healthy scalp, increased hair volume, and a stronger scalp barrier.



Key ingredients

Beer Yeast Extract Water, Polygonum Multiflorum Root Extract, Scutellaria Baicalensis Root Extract, Copper Peptide-1, Lactobacillus, L-Menthol, Dexpanthenol, Salicylic Acid, Low-molecular Hyaluronic Acid, Deca, Caffeine



Patented ingredient : DL CELLASOME(10-2023-0065346) Polygonum Multiflorum Root Extract (No.10-2433271)

Nano particle capsules measuring 150-200nm

100% Beer Yeast Extract Water instead of purified water

1Kit : Ampoule 10 ml x 10 ea Ampoule opener 1 ea, Dropper 2 ea



DOWGENE Product DL Cellasome Gene Scalp Tonic

DL CELLASOME Gene Scalp Tonic not only relieves hair loss symptoms but also moisturizes, nourishes, and cools fatigued scalp and hair to create richer hair volume.

GENE Scalp Tonic's Patented Ingredient

| Beautiful Herb Story (patented ingredient) A herbal complex made of 4 hand-picked herbs that are widely used in Europe offers amazing anti-oxidation, anti-allergenic, and anti-wrinkle effects, helping create richer hair volume and healthier scalp condition.

Lactobacillus Ferment Filtrate HX, M-Peptide ACP Light and refreshing After-Effect Anti-inflammatory / Anti-oxidation / Anti-allergenic / Anti-wrinkle

1EA : 95ml

DOWGENE Product DL Cellasome Gene Scalp Peeling

Leave-on scalp cleanser

The non-sticky liquid-type scalp peeling formula effectively addresses scalp impurities using ethanol, gently removes dead skin cells through the action of Salicylic acid and provides a cooling sensation to the scalp with menthol.

Non-sticky moisturizer

It contains 0.3% caffeine to help keep scalp healthy, and the non-sticky moisturizer keeps scalp moisturized.

Natural SW, M-peptide ACP, Caffeine 0.3% Remove impurities and dead skin cells Leave-on hypoallergenic peeler 1EA : 120ml



DOWGENE Product Intensive Scalp Care Shampoo & Conditioner DOOPIEMONG

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Manuka honey, caffeine, licorice, Korean angelica, iris extract contained in **Doopiemong Intensive Scalp Care Shampoo**



Xylitol, hydrolyzed silk, Betula Platyphylla Japonica Leaf, and

Chamaecyparis Obtusa Leaf Extract contained in Doopiemong Intensive Moisture Conditioner

Anti-hair loss functional cosmetics

This functional shampoo, featuring a unique Asian formula, effectively regulates sebum production on the scalp while moisturizing scalp pores to promote healthy hair growth and alleviate hair loss symptoms.



Unique oriental formula





Control scalp sebum discharge Moisturize scalp pore

Shampoo : 500 ml Conditioner : 250 ml

DOWGENE Company Overview

Patent & Certification



No	Intellectual property rights	
01	PCR multiplex system that simultaneously analyzes 11 animal species for current species -specific identification	Registration of patent right
02	PCR multiplex system that uses 24 STR genetic markers for DNA identification	Registration of patent right
03	Foot and mouth disease virus diagnosis method and diagnosis kit using immuno comprehensive enzyme chain reaction	Registration of patent right
04	Breast cancer diagnosis kit using circulating tumor cell detection and analysis	Registration of patent right
05	Simple kit utilizing DNA structure	Registration of patent right
06	Hair loss prevention kit using single nucleotide polymorphism and hair loss prevention method using this mechanism	Registration of patent right
07	PCR multiplex system using 20 autosomal-STR genetic markers and gonosomal genetic markers for quick DNA identification	Registration of patent right
08	Equine maternal blood line identification and physical ability prediction kit using single n ucleotide polymorphism and equine maternal blood line identification and physical ability prediction method using this mechanism	Registration of patent right
09	DNA Seal Package includes a secure, innovative DNA Seal	Registration of patent right
10	Porcine identification and parentage test using microsatellite marker	Registration of patent right
11	Missing children prevention information collection kit	Registration of patent right
12	DNA ID CARD	Registration of patent right
13	DNA and sample storage / Card patent right / Registered patent right	Registration of patent right

DOWGENE COMPANY OVERVIEW Company Information & Location

www.dowgene.com 🔀 dowgene@dowgene.com



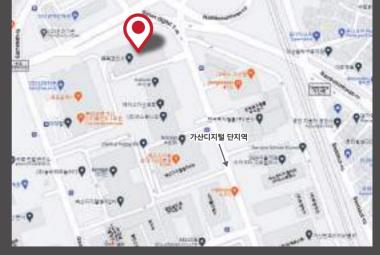
Headquarters / Company 1

Room 1228, Gasan A1 Tower (Room 1216 - 1228), 205-27 Gasan digital 1-ro, Geumcheon-gu, Seoul



Company 2 (GMP in vitro medical device manufacturing facility)

Room 513, 9th Ace High-End Tower, 233 Gasan digital 1-ro, Geumcheon-gu, Seoul





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