



DNA
SKIN

GENOTYPE REPORT

NAME: Report Sample

DATE OF BIRTH: 08 Jan 1990

SAMPLE NUMBER: DNA000000ZA

REFERRING PRACTITIONER: Doctor X

DATE REPORTED: 07 Mar 2018 00:32

WELCOME

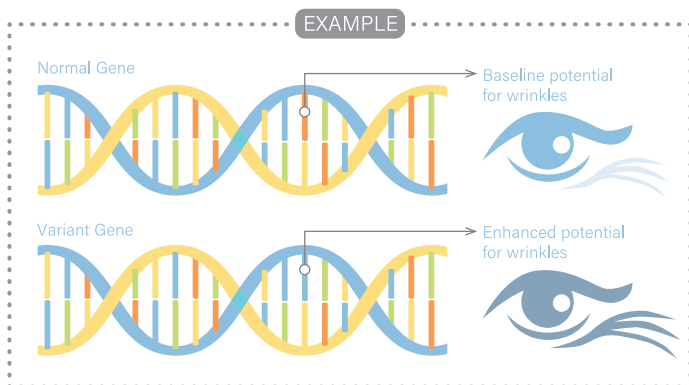
TO YOUR DNA SKIN REPORT

From your buccal swab sample we have used a process called the Polymerase Chain Reaction (PCR), which copies the DNA of your genes many times over so that we can generate sufficient quantities to analyse your genetic material. We then identify unique DNA sequences in some of your genes.

DNA Skin analyses variations on 18 genes associated with the following key areas involved in skin health and aging.

- ▶ COLLAGEN FORMATION
- ▶ PROTECTION FROM SUN & UV EXPOSURE
- ▶ INFLAMMATION
- ▶ PROTECTION FROM OXIDATIVE STRESS

Based on the results from the DNA Skin test, personalized lifestyle, nutrition, nutraceutical and cosmeceutical recommendations can be given for improved skincare and to decrease the visible signs of aging.



UNDERSTANDING GENETICS

Before reading your full assessment, please take a few minutes to review this background information. This will help you better understand your results and enhance the value of this personalised report.

WHAT ARE GENES?

Genes are segments of DNA that contain the instructions your body needs to make each of the many thousands of proteins required for life. Each gene is comprised of thousands of combinations of "letters" which make up your genetic code. The code gives the instructions to make the proteins required for proper development and function.

WHAT ARE GENE VARIATIONS?

With the exception of identical twins, all people have small differences (variations) in their genetic code. It is these differences that make each of us unique. An example of a genetic variation is that one "letter" may be replaced by another. These variations can lead to changes in the resulting proteins being made. For example a "C" may be changed to a "G" at a point in the genetic code. When the variation affects only one genetic "letter" it is called a Single Nucleotide Polymorphism, or SNP (pronounced "snip"). Variations can however also affect more than one "letter".

ARE GENE VARIATIONS "BAD"?

In general, variations should not be considered good or bad. Rather, genetic variations are simply slight differences in the genetic code. The key is to know which form of the variation you carry in order to make appropriate lifestyle choices.

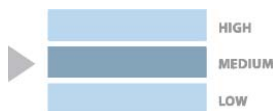
HOW TO READ THIS REPORT

Below each section where your gene results are displayed, you will be assigned an overall priority, or risk, impact for that section. This will be based on your gene results. An explanation will be given regarding the area in which the genes are acting, associated risks, as well as specific skin, diet, nutraceutical and lifestyle recommendations based on your genotype.

YOUR SUMMARY RESULTS

Below is a summary of your priority areas based on your unique gene results.

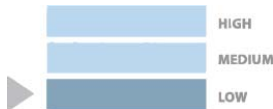
FIRMNESS & ELASTICITY



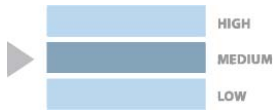
SUN SENSITIVITY & PIGMENTATION



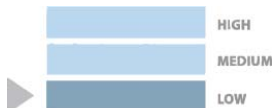
SUN DAMAGE, PROTECTION & REPAIR



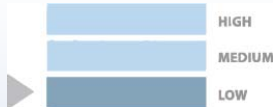
PROTECTION FROM OXIDATIVE STRESS



DETOXIFICATION & SKIN SENSITIVITY



INFLAMMATION



FIRMNESS & ELASTICITY

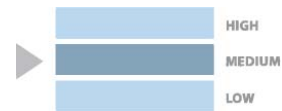
Changes in the extracellular matrix, with regards to synthesis and degradation, is an important contributing factor of skin aging, and gene variations relevant for extracellular matrix remodeling may be responsible for the underlying susceptibility of accelerated skin aging. The genes in this area are involved in cell growth regulation & tissue remodeling. SNPs tested have association to accelerated aging after UV exposure & oxidative stress insult.

YOUR GENETIC RESULTS

GENE	SNP	GENOTYPE
MMP1	1G/2G	1G/1G
COL1A1	G>T	GG

YOUR SUMMARY RESULTS

PRIORITY
SCORE



WHAT DOES THIS MEAN FOR ME?

Changes in the extracellular matrix, with regards to synthesis and degradation, is an important contributing factor of skin aging, and gene variations relevant for extracellular matrix remodeling may be responsible for the underlying susceptibility of accelerated skin aging.

WHAT CAN I DO ABOUT IT?

According to your gene variations, this is a medium priority area for you. You may experience more skin sensitivity, and wrinkling after sun exposure. It is important to make use of a good quality, high SPF sun screen, as well as a good moisturiser targeting the protection and synthesis of collagen and elastin. Other topicals, which include the following ingredients, may also be beneficial; retinoids & mixed tocopherols, vitamin C and peptides. Intake of certain nutrients may also be beneficial to promote healthy collagen formation. These include oral supplementation of hydrolysed type 1 collagen, vitamin C, iron, and vitamin D.



SUN SENSITIVITY & PIGMENTATION

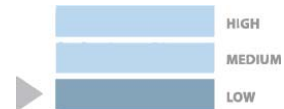
The gene variants tested in this area have been associated with normal pigmentation and protecting the skin against sun damage. The ability to produce a specific type of melanin, the pigment (or colour) in one's skin, is dependent on genes involved in melanin production. Certain gene variants increase predisposition for having higher amounts of the pigment, pheomelanin, which is associated with a decreased tanning ability and an increased risk for skin sensitivity and skin damage with sun, and UV, exposure.

YOUR GENETIC RESULTS

GENE	SNP	GENOTYPE
MC1R	Arg151Cys	CC
ASIP	8818 G>A	CC
ASIP	rs4911414 G>T	GG

YOUR SUMMARY RESULTS

PRIORITY
SCORE



WHAT DOES THIS MEAN FOR ME?

The ability to produce a specific type of melanin, the pigment (or colour) in one's skin, is dependent on genes involved in melanin production. Certain gene variants increase predisposition for having higher amounts of the pigment, pheomelanin, which is associated with a decreased tanning ability and an increased risk for skin sensitivity and skin damage with sun, and UV, exposure.

WHAT CAN I DO ABOUT IT?

Your genotype combination in this area may provide you with some protection from UV exposure, specifically with regards to skin sensitivity and increased freckling. It is still important to remain vigilant with regards to UV exposure and tanning.

SUN DAMAGE, PROTECTION & REPAIR

The genes tested in this area play an important role in DNA protection and repair. Variants have been associated with increased risk for aging caused by UV exposure. Exposure to UV rays, as well as synthetic compounds and environmental pollutants, increases the risk for oxidative stress and cellular damage, which has been associated with premature aging. Certain genes help to repair damaged DNA, thereby offering protection against cellular damage. Variations in these genes lead to decreased efficiency to repair damage.

YOUR GENETIC RESULTS

GENE	SNP	GENOTYPE
XRCC1	Q299R	CT
	R280H	GA
hOGG1	Ser326Cys	CC
TERT	C>T	CT

YOUR SUMMARY RESULTS

PRIORITY
SCORE



WHAT DOES THIS MEAN FOR ME?

Exposure to UV rays, as well as synthetic compounds and environmental pollutants, increases the risk for oxidative stress and cellular damage, which has been associated with premature aging. Certain genes help to repair damaged DNA, thereby offering protection against cellular damage. Variations in these genes lead to decreased efficiency to repair damage.

WHAT CAN I DO ABOUT IT?

Your genotype combination in this area indicates that this is not a priority for you, and there is no genetically increased risk based on the genes tested.

Follow standard guidelines as prescribed by your healthcare practitioner.

PROTECTION FROM OXIDATIVE STRESS:

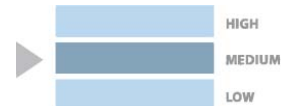
The genes tested in this area code for key antioxidant enzymes that scavenge free radicals and protect against oxidative stress. Free radicals are highly reactive molecules that can cause damage to our DNA and cells, leading to increased oxidative stress. This has been related to accelerated aging processes in the body and may increase the risk of the appearance of wrinkles and prematurely aged skin. We are exposed to free radicals when we have a high exposure to pro-carcinogens in the environment. These include cigarette smoke, synthetic chemicals, smoked foods and a diet high in sugar and trans-fats. Free radicals are also a normal by-product of the body's energy-generating processes.

YOUR GENETIC RESULTS

GENE	SNP	GENOTYPE
SOD2	C>T	CC
GPX1	C>T	CT
CAT	-262 C>T	CT

YOUR SUMMARY RESULTS

PRIORITY
SCORE



WHAT DOES THIS MEAN FOR ME?

Free radicals are highly reactive molecules that can cause damage to our DNA and cells, leading to increased oxidative stress. This has been related to accelerated aging processes in the body and may increase the risk of the appearance of wrinkles and prematurely aged skin. We are exposed to free radicals when we have a high exposure to pro-carcinogens in the environment. These include cigarette smoke, synthetic chemicals, smoked foods and a diet high in sugar and trans-fats. Free radicals are also a normal by-product of the body's energy-generating processes.

WHAT CAN I DO ABOUT IT?

Based on your genotype combination, your antioxidant enzymes may not work at optimal capacity, leading to increased risk for oxidative stress. It is important to avoid environmental pro-carcinogens, manage weight and include regular, moderate intensity exercise. Ensure a high intake of a variety of fruits and vegetables, and adequate selenium intake, as well as nutrients to optimise glutathione production. Consider using a topical that contains specific antioxidants as well as protective agents that serve as a barrier to pollutants from the environment.



DETOXIFICATION & SKIN SENSITIVITY

The genes tested in this area code for detoxification enzymes that help process toxins and pollutants from the environment, where variants have been associated with decreased detoxification capacity, and therefore an increased risk for cellular damage and accelerated aging. The body's' natural detoxification process involves two steps; Phase 1 and Phase 2. A toxin initially enters Phase 1, the P-450 cytochrome system, and is reduced to smaller fragments. These fragments then progress to Phase 2, where they are bound to molecules such as glutathione, glycine and sulfate. This process creates a new non-toxic molecule that can be excreted.

YOUR GENETIC RESULTS

GENE	SNP	GENOTYPE
GSTP1	A>G	AA
EPHX1	rs1051740	CT
NQO1	T>C	TC

PRIORITY
SCORE



WHAT DOES THIS MEAN FOR ME?

The body's' natural detoxification process involves two steps; Phase 1 and Phase 2. A toxin initially enters Phase 1, the P-450 cytochrome system, and is reduced to smaller fragments. These fragments then progress to Phase 2, where they are bound to molecules such as glutathione, glycine and sulfate. This process creates a new non-toxic molecule that can be excreted.

WHAT CAN I DO ABOUT IT?

Your genotype combination is associated with efficient phase 2 detoxification processes and this is therefore a low priority area for you.