

The national surge in chronic health conditions is prompting medical practitioners to seek new tools to better understand the underlying causes of disease. At the same time, the mapping of the human genome plus thousands of following studies is expanding our understanding of the role that genes play in our health. Genes influence not just serious conditions, but also many of the biochemical processes that influence our general health and wellness. Patients have long known that they are unique individuals, genetic testing allows unique insight into each person's potential for wellness.

There are many options for genetic testing, but providers are increasingly looking to single nucleotide polymorphism (SNP) testing to learn additional information that will inform treatment decision making now and into the future. Your provider has chosen to work with Kashi Clinical Laboratories for a very specific clinical test panel that provides information on a wide range of genes that influence health and overall wellness.

The genes in the panel provide information associated with:

- Cardiac disease
- Obesity and diabetes
- Nutritional deficiencies
- Cravings
- What foods to eat
- Memory and brain health
- Mood disorders and insomnia
- Bone health
- Hormone imbalance

Technology matters: Kashi uses the latest in quantitative real-time polymerase chain reaction instrumentation with a high degree of sensitivity.

Defy Your DNA Program Report					
PATIENT:		ORDERING PROVIDER:		LABORATORY INFORMATION:	
Ashley Sample 45 Allele Springs Road Phoeland, AF 87432 DOB: 01/09/2017		Jean Wizard, MD Wellness Central Clinic 5167 Leptin Heights Road Phoeland, AF 97429		Lab ID Number: 1412500015 Sample Collection Date: 06/03/17 Sample Arrival Date: 06/05/17 Report Date: 06/09/17	
GENE MARKER	RESULT	RISK	HETERO-ZYGOUS	NON RISK	ASSOCIATION
WEIGHT					
FTO	TA		●		Appetite regulation and craving frequency
DRD2	TT	●			Dopamine receptor, inflammatory response, eating behavior
MC4R	TT	●			Satiation and metabolism regulation
FABP2	AG		●		Dietary fat sources and fat utilization
ADRB2	GG			○	Carbohydrate digestion & physical activity
SH2B1	GG			○	Regulation of leptin and insulin
CARDIAC					
9p21	GG			○	Cell proliferation in coronary arteries
eNOS	TT	●			Nitric Oxide Synthesis and vasodilation
MTHFR-C677T	CT		●		Processing folate, and regulating homocysteine
MTHFR-A1298C	CC	●			Processing folate, and regulating homocysteine
SIC01b1*5	TC		●		Statin metabolism
AGT	TT	●			Blood pressure regulation
APOE	E3/E4		●		Fat and cholesterol levels and transportation
NUTRITION					
GC1/CG2	TC			○	Vitamin D binding & transport to receptors
CYP2R1	AG		●		Vitamin D metabolism
NADSYN1/DHCH7	TG		●		Vitamin D conversion to cholesterol
VDR BsmI	GG			○	Vitamin D and bone density
VDR-Taq	TT	●			Vitamin D receptor, related to dopamine in conjunction with COMT
VDR-Fok	CT		●		Vitamin D receptor and affect on blood sugar regulation
TMPS55 (Iron)	CT		●		Iron levels and risk for iron deficiency
BCMO1 (Vit A)	GG	●			Conversion of beta carotene to Vitamin A
FUT2-1	GG	●			Vitamin B12, brain and nervous system function
GRACEFUL AGING					
WNT16	TT	●			Bone mineral density
ESR1-1	CT		●		Estrogen's impact on bone turnover
ESR1-2	AA	●			Estrogen's impact on bone turnover
COMT-V158M	VAL/MET			○	Metabolization of catecholamines and estrogen
CYP1A1	GG	●			Estrogen metabolism
MAOA	TT			○	Catecholamine and catecholesterogen metabolism
APOE	E3/E4		●		Plaque formation in brain tissue
METHYLATION					
eNOS	TT	●			Nitric Oxide Synthesis and vasodilation
MTHFR-C677T	CT		●		Widespread enzyme function
MTHFR-A1298C	CC	●			Regulation of SAMe and neurotransmitters
CBS-A360a	CT		●		Homocysteine to cystathionine & glutathione
CBS-C699T	TT	●			Homocysteine to cystathionine & glutathione
MTR-A2756G	GG	●			Methionine synthesis
MTRR-A66G	AG		●		Methyl B12 regeneration, supports methionine synthesis

RISK ALLELE KEY: ○ Non Risk ● Risk Allele Heterozygous ● Risk Allele Homozygous

Testing Performed by Kashi Clinical Laboratories, Inc. | 10101 SW Barbur Blvd., Suite 200 | Portland, OR 97219 | CAP: 722234 | CLIA No. 38D1058476

Scientific rigor matters: SNP's are only included in our panels when peer reviewed studies show there is a clear connection with treatment decision making, the studies are relevant across a range of population types, clinical intervention is indicated, and that nutritional or other lifestyle choices can affect the regulation of gene expression.

Customer service matters: Your results will be ready within 5-7 business days of receipt at the lab. An easy to understand report shows your areas of potential risk and provides additional information such as lifestyle recommendations.