

Genova IMMUNOGENOMIC PROFILE

The ImmunoGenomic Profile evaluates genetic variations in genes that modulate immune and inflammatory activity. These variations can affect balance between cell (Th-1) and humoral (Th-2) immunity, trigger potential defects in immune system defense, and stimulate mechanisms underlying chronic, overactive inflammatory responses.

Why is the ImmunoGenomic Profile clinically useful?

Specialised genomic testing can provide a glimpse into ones potential health future. Genetic testing enables one to minimise the risk by:

- Identifying hidden gene mutations that may promote chronic disease
- Preventing disease through early intervention
- Modifying gene expression through more precise, targeted, individualised interventions
- Identifying key areas for follow-up testing
- Monitoring therapeutic effectiveness of intervention strategies with laboratory testing

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The ImmunoGenomic Profile evaluations include:

TNF α

This SNP has been linked to a wide variety of conditions such as acute kidney allograft rejection, increased risk for asthma, associated with higher susceptibility to Crohn's disease, associated with Grave's disease, increased risk for acute heart attack, increased risk for liver cancer and are also at higher risk for hepatic fibrosis, increased risk for non-Hodgkin lymphoma, increased risk of early-onset psoriasis and Systemic Lupus Erythematosus (SLE).

Th2 cytokines – IL4, IL13, IL6, IL10

Interleukin 4 (IL4) is a cytokine that induces differentiation of naive helper T cells (Th0 cells) to Th2 cells. Upon activation by IL4, Th2 cells subsequently produce additional IL4 in a positive feedback loop. It is closely related and has functions similar to Interleukin 13 (IL13) which is secreted by many cell types, but especially T helper type 2 (Th2) cells, and is a mediator of allergic inflammation and disease. Interleukin 6 (IL6) is an autoregulatory cytokine involved in numerous inflammatory responses, and Interleukin 10 (IL10) is an anti-inflammatory cytokine involved in several disease processes.

GENOVA IMMUNOGENOMIC PLUS (buccal swab) [Test code: 8005]

- ❖ IL-1 β , TNF α , IL-4, IL-6, IL-10, IL-13.

Other genomic tests available

- **Genova CardioGenomic Plus Profile [8002]:** SNPs for Apolipoprotein-E (APOE), Cholesteryl ester transfer protein (CETP), Selectin E (SELE), MTHFR, Guanine Nucleotide-binding protein (GNB3), Angiotensin II Receptor-1 (AGTR1), Prothrombin (Factor 2), Leiden (Factor 5), Plasminogen Activator Inhibitor-1 (PAI-1), Glycoprotein 3 (GP3A)
- **Genova DetoxiGenomic Profile [8003]:** SNPs for Phase I: Cytochrome P-450 (CYP1A1, CYP1B1, CYP2A6, CYP2D6, CYP2E1, CYP2C9, CYP1C19, CYP3A4); SNPs for Phase II: Methylation (COMT), Acetylation (NAT1, NAT2), Glutathione conjugation (GSTM1, GSTP1), Oxidative protection (SOD1, SOD2)
- **Genova EstroGenomic Profile [8004]:** SNPs for Estrogen metabolism (CYP1A1, CYP1B1, COMT, GSTM1, GSTP1), Hypercoagulation (GP3A, PAI-1, Factor 2, Factor 5), Cardiovascular (APO-E, MTHFR, TNF α , IL-6), Osteoporosis (VDR, TNF α , IL-6)
- **Genova NeuroGenomic Profile [8006]:** SNPs for Methylation (COMT, MTHFR), Detoxification (GSTM, GSTP), Oxidative protection (SOD2)
- **Phase 1 Detoxification Enzymes [8007]:** SNPs for Superoxide dismutase Cu/Zn (SOD1), Superoxide dismutase Mn (SOD2), N-Acetyltransferase-2 (NAT2), Cytochrome P450-1A1 (CYP1A1)
- **Phase 2 Detoxification Enzymes [8008]:** SNPs for Glutathione S-Transferase (GST-T1, GST-P1, GST-M1)
- **Advanced Methylation Genes [8009]:** SNPs for methylenetetrahydrofolate reductase (MTHFR), 5-methyltetrahydrofolate-homocysteine methyltransferase (MTR), methionine synthase reductase (MTRR), Adenosylhomocysteinase (AHCY), Catechol-O-methyltransferase (COMT)

How to order a test kit:

To order a test kit simply request the test name or test code on a WellLab request form and have the patient phone Well Lab Customer Service on 03 2727 7434.