

Complete Advanced Immunology Profile

Our testing is divided into three significant areas:

1. Genetic testing: (full HLA profile) most centers only order DQalpha or if full HLA is ordered the genetic predispositions (so important in helping to diagnose underlying immune issues) are not analyzed. HLA disparity with your partner requires a full HLA analysis as well not only testing or looking at DQalpha.
2. Cellular testing: (looking at cell numbers and their propensity to make certain cytokines, called Intra cellular cytokine ratios) Most centers only use one cell line (CD4+ cells) to look at TNF and INFgamma and use only IL10 as the anti-inflammatory marker in these ratios(no one looks at the more important IL- 4 and at the production of all of these cytokines in all of your other cells i.e. NK, NKT, and CD8+ T cells)
3. Serum cytokines and antibodies: to look for the actual products made by your white blood cells that are released into the fluid around your cells (the serum).

Using all three of the above we are able to:

1. Determine your predisposition to immune related problems and autoimmune disease by studying your full HLA complement of genes(they are the finger print of your immune system)
2. Determine immune compatibility with your partner and receptivity of your uterine immune cells.
3. Determine by measuring intracellular cytokine ratios and cell numbers how your immune system is pointing (i.e. to an TH1 or TH2 dominant state)
4. Determine the level of activity of the immune system by looking at the levels of cytokines and antibodies actually released from the cells into the serum of the blood. (Many patients think their TNF or INFgamma ratios that they come with from different lab are actually serum but they are not , they are just intracellular cytokine ratios and by themselves do NOT tell you how the immune system is responding.

Our Complete Advanced Immunology Profile:

1. **KIR Receptor Genotypes:** 2DL1,2DL2,2DL3,2DL4,2DL5 , 3DL1, 3DL2, 3DL3, 2DS1,, 2DS2,2DS3,2DS4,2DS5,3DS1

2. **HLA Genotyping of both partners**

HLA-DQ ALPHA

HLA- DQ BETA Sequence

HLA- DRB1 Sequence

HLA-DRB3

HLA-DRB4

HLA-DRb5

HLA-A

HLA-B

HLA-C

3. **IM-Xpress Intracellular Cytokine:**

(Cell Viability)

CD3+/8+/IFNG

CD3+/8+/TNF-A

CD3+/8+/IL-10

TNF-A: IL-10 (CD3+/"CD4+")

IFNG: IL-10 (CD3+/"CD4+")

(CD3+/"CD4+") / TNF-A

CD3+/8+/IL-4	(CD3+/"CD4+")/IFNG
CD3+/8-/IL-4	(CD3+/"CD4+")/IL-10
CD3+/56+/INFG	
CD3+/56+/TNF-A	
CD3+/56+/IL-10	
CD3+/56+/IL-4	
CD3-/56+/INFG	
CD3-/56+/TNF-A	
CD3-/56+/IL-10	
CD3-/56+/IL-4	

**4. NK Activity comprehensive Panel
(Cell Viability)**

E:T 50:1 NATIVE STATE

E:T 25:1 NATIVE STATE

E:T 12.5:1 NATIVE STATE

E:T 6.25:1 NATIVE STATE

E:T 25:1+IL-2 STIMULATION

E:T 25:1+INTRALIPID

E:T 25:1 +12.5MG/DL LGG

E:T 25:1 +6.25MG/DL LGG

**4. Immunophenotype Expanded
(Cell Viability)**

CD3+(TOTAL T CELLS)

CD3+/8+ (CYTOTOX/SUPP T CELLS)

CD3+/56+ (NK T CELLS)

CD3+/4+(T Helper/Inducer CELLS)

CD3-/56+(TOTAL NK CELLS)

CD3+/4+/25+

CD3-/56+/16+(16+ NK CELLS)

CD3+/25+ (Activated IL2R T CELLS)

CD3-/56+/16-

CD3+/28+

CD3+/4+/8-/56+

CD19+ (TOTAL B Cells)

CD3+/4-/8+/56+

CD19+/5+ (CYTOTOXIC B CELLS)

CD3+/4-/8-/56+

CD3/HLA-DR+(ACTIVATED T CELLS)

CD3+/4+/25H/127LO/FOXP3(TREG)

5. Serum Cytokines

(Cell Viability)

EPIDERMAL GROWTH FACTOR

FIBROBLAST GROWTH FACTOR 2

EOTAXIN

GRANULOCYTE COLONY STIM FACTOR

GM/CSF

INTERFERON ALPHA 2

INTERFERON GAMMA

INTERLEUKIN 1 RECEPTOR ALPHA

INTERLEUKIN 6

INTERLEUKIN 10

INTERLEUKIN 12 P40 SUBUNIT

INTERLEUKIN 13

INTERLEUKIN 15

INTERLEUKIN 17

MONOCYTE CHEMOTACTIC PROTEIN -3

MACROPHAGE – DERIVED CHEMOKINE

SOLUBLE CD40 LIGAND

TISSUE NECROSIS FACTOR –ALPHA

TISSUE NECROSIS FACTOR- BETA

TRANSFORMING GROWTH FACTOR –A

VASCULAR END GROWTH FACTOR

FMS- RELATED TYROSINE KINASE 3

FRACTALKIN

GROWTH REGULATED ONCOGENE

INTERLEUKIN 2

INTERLEUKIN 3

INTERLEUKIN 4

INTERLEUKIN 5

INTERLEUKIN 6

INTERLEUKIN 7

INTERLEUKIN 8

INTERLEUKIN 9

IP GAMMA INDUCED PROTEIN 10

MONOCYTE CHEMOTACTIC PROTEIN -1

MACROPHAGE INFLAM PROTEIN,1A

MACROPHAGE INFLAM PROTEIN ,1B

6. Anti HLA Antibodies

AHLA AB CLASS 1

AHLA AB CLASS 1 PARTNER SPECIFIC

AHLA AB CLASS II

AHLA AB CLASS II PARTNER SPECIFIC

REFLEX TO COMPLEMENT FIXATION

Couples Immunology Panel 3.0 (Female)+ shipping

- CBC w/auto diff
- IM Express
- NKA
- T_RIP
- FoxP3
- KIR genotype Profile.
- HLA Panel
- Anti HLA antibodies
- Rheumatoid Factor
- Anti CCP antibodies
- ANA Profile
- APA Aexpanded panel
- AMH
- ANA Screen
- PAI 4G/5G
- TPO
- THAB
- Immunoglobulin Panel(IgG/IgM Total)
- IgA
- IgE
- Vitamin D 3
- C3 complement activity
- C4 complement activity
- Fasting Homocysteine
- TSH
- TSH receptor antibody
- MTHFR Polymorphism

Couples Immunology tests (Male)

- HLA Panel

Monitoring 3.0 Expanded Panel (female Pregnant patients)

- CBC w/auto diff
- IM Express
- NKA
- T_RIP
- FoxP3
- Vit D 25 Hydroxy
- C3 Complement activity
- C4 Complement activity
- APA Expanded Panel
- TPO
- THAB
- ANA Profile
- Beta HCG
- PAPP
- TSH Receptor antibody

Monitoring Panel 3.0 (female Non _ Pregnant Patients)

- CBC w/auto diff
- IM Express
- NKA
- T_RIP
- FoxP3
- Vit D 25 Hydroxy
- C3 Complement activity
- C4 Complement activity
- APA Expanded Panel
- TPO
- THAB
- ANA Profile
- TSH Receptor antibody