



LAB REPORT

HOLLY WILKINSON (F) 10/10/2025

Patient Details AGE (DOB): ORDER NUMBER: B1B2K9K12 SAMPLE ID: 2509050006	Specimen Details TYPE: PERIPHERAL BLOOD RECEIVED: 17/09/2025 CONDITION: ACCEPTABLE (GOOD)	Partner Details NAME: LUKE WILKINSON AGE (DOB): GENDER: MALE
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NK cell profile/Regulatory T-Cell assay (Tregs)	Result	Ref. Range/Normal
CD56+/CD16+ NK lymphocytes	10.53 %	<12.0
Regulatory T-Cells (Tregs)	0.30 % (L)	>0.8

NK cell cytotoxicity assay	Result	Intralipid Inhibition	Ref. Range/Normal
50:1	25.32 %	20.17 %	<40 %
25:1	19.61 %	15.39 %	<30 %
12.5:1	15.10 %	8.64 %	<20 %

Th1/Th2 cytokine ratio assay	Result	Ref. Range/Normal
(CD3+CD4+) IFN γ /IL-10	13.11 %	Normal <15> Increased <30> High
(CD3+C D4+) TNF α /IL-10	8.16 %	Normal <15> Increased<30> High

Leukocyte antibody detection (LAD) (crossmatch)	Result	Ref. Range/Normal
T cells (IgM)	Weak Positive (11.29%)	positive
T cells (IgG)	Negative (9.07%)	positive
B cells (IgM)	Weak Positive (14.49%)	positive
B cells (IgG)	Negative (9.07%)	positive
<i>*For results identified as positive, the percentage of positive T or B cells will be reported.</i>		

HLA DQA-1 high resolution (2-field) typing analysis	Result	Ref. Range/Normal
Allele 1	DQA1*03:03 (No Match detected)	no matching
Allele 2	DQA1*05:01 (No Match detected)	no matching
Partner Allele 1	DQA1*01:03 (No Match detected)	no matching
Partner Allele 2	DQA1*03:01 (No Match detected)	no matching

Maternal KIR typing	Possible genotype	Result	Ref. Range/Normal
The following genotype is likely for the patient:	2DL1, 2DL3, 2DL4,2DS4, 3DL1, 3DL2, 3DL3, 2DP1, 3DP1	Genotype KIR AA	Bx

Paternal HLA-C high resolution (2-field) allele group typing analysis	Result	Ref. Range/Normal
Allele 1 C*07:189	C1	C1
Allele 2 C*07:46/07:125/07:146/07:209/07:234/07:319/07:356/07:401/07:452N	C1	C1

INTERPRETATION OF RESULTS AND RECOMMENDATIONS: LOW TO MODERATE RISK

DIAGNOSIS:	MILD IMMUNE TOLERANCE DEFICIENCY DETECTED
DESCRIPTION:	<p>The patient presents with low levels of cytotoxic NK cells and low NK cell cytotoxicity, both of which are favorable. The Th1/Th2 cytokine ratio is also within favorable parameters, suggesting an immunologically receptive environment in this respect. Regulatory T cell (Treg) levels, however, are reduced, which may impair immune tolerance at the maternal-fetal interface and has clinical significance.</p> <p>The Leukocyte Antibody Detection (LAD) test was weakly positive, which while it can be considered as mildly favorable finding there is still room for improvement. A weakly positive LAD suggests partial alloimmune priming, which may still be enhanced further to better support maternal immune adaptation to the embryo. Furthermore, HLA-DQA1</p>

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compatibility testing indicates no match, which is considered favorable and associated with reduced risk of alloimmune recognition.

Maternal KIR genotype is high risk (KIR AA), but this is counterbalanced by the fact that the paternal HLA-C genotype does not include HLA-C2 alleles. Therefore, while the maternal KIR profile would normally raise concern, the absence of paternal C2 moderates the overall risk.

TREATMENT: The primary immunological concerns in this case are the **low Treg levels** and the **lack of enough protective LAD antibodies**. **Lymphocyte Immunization Therapy (LIT) is recommended** to boost maternal blocking antibodies, especially in light of the negative LAD result.

Each case should be assessed individually by an experienced reproductive immunologist or fertility specialist with expertise in immune-related infertility. These treatments aim to promote immune tolerance and improve the chances of successful implantation and pregnancy.

Note: Many of these treatments are still evolving, and research continues. It is essential for couples to consult with a qualified specialist to determine the best course of action based on their unique situation and the latest scientific evidence.

RETESTING: No further immune testing is immediately required unless clinically indicated. However, a repeat LAD test may be recommended after LIT to confirm the development of blocking antibodies.

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