

Client: Example Client ABC123
123 Test Drive
Salt Lake City, UT 84108
UNITED STATES

Physician: Doctor, Example

Patient: Patient, Example

DOB 10/20/2012
Gender: Female
Patient Identifiers: 01234567890ABCD, 012345
Visit Number (FIN): 01234567890ABCD
Collection Date: 00/00/0000 00:00

Toll-Like Receptor Function

ARUP test code 0051589

Toll-Like Receptor Function

See Note

H=High, L=Low, *=Abnormal, C=Critical

This test requires the submission of a client control sample to determine whether abnormal results observed in the patient sample are due to artifacts of specimen collection, transport, and/or handling, or patient condition. Abnormal patient results in the absence of a client submitted control sample should be correlated clinically and interpreted with caution.

TNF-a (pg/ml)

	PATIENT	CLIENT CONTROL	LAB CONTROL
Media	0	NO CTRL	9
PAM3CSK4	77	NO CTRL	500
Zymosan	436	NO CTRL	951
Flagellin	65	NO CTRL	514
CL097	426	NO CTRL	1387
LPS	373	NO CTRL	1613

IL-1b (pg/ml)

	PATIENT	CLIENT CONTROL	LAB CONTROL
Media	0	NO CTRL	1
PAM3CSK4	103	NO CTRL	279
Zymosan	624	NO CTRL	1367
Flagellin	67	NO CTRL	515
CL097	693	NO CTRL	1997
LPS	262	NO CTRL	2713

IL-6

	PATIENT	CLIENT CONTROL	LAB CONTROL
Media	1	NO CTRL	20
PAM3CSK4	3425	NO CTRL	8042
Zymosan	2216	NO CTRL	2342
Flagellin	2209	NO CTRL	6263
CL097	2959	NO CTRL	5278
LPS	5319	NO CTRL	>10240

Interpretation:
Normal cytokine responses to TLR 1,2,4-8 stimulation compared to simultaneously run controls, suggesting normal Toll-Like Receptor function.



The following reagents stimulate corresponding TLR ligands:

PAM3CSK4:	TLR2 and TLR1
Zymosan:	TLR2 and TLR6
Flagellin:	TLR5
CL097:	TLR7 and TLR8
LPS:	TLR4

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INTERPRETIVE INFORMATION: Toll-Like Receptor Function

Toll-like receptors (TLR) are tested independently by stimulation with TLR-specific ligands in a peripheral blood mononuclear cell (PBMC) culture. PBMC production of IL-1 beta, IL-6, and TNF alpha is determined by multiplex bead assay for TLR 1,2,4-8.

TLR-specific ligands include Pam3CSK4, a synthetic bacterial lipoprotein (TLR2-TLR1 ligand); zymosan cell wall particles from *Saccharomyces cerevisiae* (TLR6-TLR2 ligand); lipopolysaccharide (LPS) ultra-pure *S. minnesota* LPS (TLR4 ligand); flagellin purified from *S. typhimurium* (TLR5 ligand); and CL097 imidazoquinoline compound (TLR7-TLR8 ligand).

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This test was developed and its performance characteristics determined by ARUP Laboratories. It has not been cleared or approved by the US Food and Drug Administration. This test was performed in a CLIA certified laboratory and is intended for clinical purposes.

VERIFIED/REPORTED DATES

Procedure	Accession	Collected	Received	Verified/Reported
Toll-Like Receptor Function	23-017-401653	00/00/0000 00:00	00/00/0000 00:00	00/00/0000 00:00

END OF CHART

H=High, L=Low, *=Abnormal, C=Critical