Diagnostic Solutions laboratory

5894 Shiloh Rd, Ste 101 | Alpharetta GA 30005
877.485.5336

Patient: Jaime Huynh	Accession: 20220913-0078
Collected: 9/5/2022	Received: 9/12/2022
DOB: 9/16/1976	Completed: 9/26/2022
Gender: Female	Ordered by: Maeve Beary,

DNA STOOL ANALYSIS BY QUANTITATIVE PCR

GI-MAP® GI Microbial Assay Plus

YOUR PERSONALIZED REPORT

some of these reportable genetic variations.

PATHOGENS

The testing includes pathogens (bacterial, parasitic and viral) commonly known to cause gastroenteritis. Note that not all individuals with positive findings will present with symptoms. Many factors, including the health of the individual (such as immune health, digestive function, and microbiome balance), the transient nature of most pathogens, and the presence and expression of virulence factors, all contribute to pathogen virulence and individual symptoms.

BACTERIAL PATHOGENS	Result	Reference
Campylobacter	<dl	< 1.00e3
C. difficile Toxin A	<dl	< 1.00e3
C. difficile Toxin B	<dl	< 1.00e3
Enterohemorrhagic E. coli	<dl	< 1.00e3
E. coli O157 – genetic variant	<dl	< 1.00e3
Enteroinvasive *E. coli/Shigella*	<dl	< 1.00e3
Enterotoxigenic *E. coli* LT/ST	<dl	< 1.00e3
Shiga-like Toxin *E. coli* stx1	<dl	< 1.00e3
Shiga-like Toxin *E. coli* stx2	<dl	< 1.00e3
Salmonella	<dl	< 1.00e4
Vibrio cholerae	<dl	< 1.00e5
Yersinia enterocolitica	<dl	< 1.00e5
PARASITIC PATHOGENS		
Cryptosporidium	<dl	< 1.00e6
Entamoeba histolytica	<dl	< 1.00e4
Giardia	<dl	< 5.00e3
VIRAL PATHOGENS		
Adenovirus 40/41	<dl	< 1.00e10
Norovirus GI/II	<dl	< 1.00e7

KEY: Results are reported as genome equivalents per gram of stool, which is a standard method for estimating the number of microbes measured per gram of stool, based on qPCR analysis of DNA samples.

Results are expressed in standard scientific notation. For example, a reported result of 3.5e7 is equivalent to 3.5×10^7 microbes per gram, which equals 35,000,000 (35 million) microbes per gram of stool.

< dl represents results below detectable limit.

The assays were developed and/or the performance characteristics determined by Diagnostic Solutions Laboratory.

CLIA# 11D-2097795
Medical Director - Diane Farhi, MD

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HELICOBACTER PYLORI

H. PYLORI & VIRULENCE FACTORS	Result	Reference
Helicobacter pylori - testing cell	<dl	< 1.00e3
Virulence Factor, babA genetic variances	N/A	Negative
Virulence Factor, cagA - specific for	N/A	Negative
Virulence Factor, dupA certain conditions	N/A	Negative
Virulence Factor, iceA	N/A	Negative
Virulence Factor, oipA	N/A	Negative
Virulence Factor, vacA	N/A	Negative
Virulence Factor, virB	N/A	Negative
Virulence Factor, virD	N/A	Negative

CFU 1000

COMMENSAL/KEYSTONE BACTERIA

COMMENSAL BACTERIA	Result	Reference
Bacteroides fragilis	1.10e11	1.6e9 - 2.5e11
Bifidobacterium spp.	4.55e11	> 6.7e7
Enterococcus spp.	5.43e5	1.9e5 - 2.0e8
Escherichia spp.	2.01e9	3.7e6 - 3.8e9
Lactobacillus spp.	4.05e6	8.6e5 - 6.2e8
Enterobacter spp.	2.52e6	1.0e6 - 5.0e7
* *Akkermansia muciniphila* weight resistance difficult to extract nutrients.	<dl L	1.0e1 - 8.2e6
Faecalibacterium prausnitzii	1.38e5	1.0e3 - 5.0e8
Roseburia spp.	1.35e9	5.0e7 - 2.0e10
BACTERIAL PHYLA		
Bacteroidetes	3.15e12	8.6e11 - 3.3e12
* *Firmicutes* ↑ easier weight gain	3.60e11 H	5.7e10 - 3.0e11
Firmicutes:Bacteroidetes Ratio	0.11	< 1.0

mucosal health - when ↓ akkermansia - sensitive to upturn.

⇒ heal + seal formula.

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OPPORTUNISTIC/OVERGROWTH MICROBES

DYSBIOTIC & OVERGROWTH BACTERIA	Result		Reference
Bacillus spp.	4.65e4		< 1.76e6
Enterococcus faecalis	<dl		< 1.00e4
Enterococcus faecium	<dl		< 1.00e4
Morganella spp.	<dl		< 1.00e3
Pseudomonas spp.	<dl		< 1.00e4
Pseudomonas aeruginosa	<dl		< 5.00e2
Staphylococcus spp.	<dl		< 1.00e4
Staphylococcus aureus	<dl		< 5.00e2
* *Streptococcus* spp.	9.29e3	High ↑	< 1.00e3
COMMENSAL OVERGROWTH MICROBES			
Desulfovibrio spp.	2.26e7		< 7.98e8
Methanobacteriaceae (family)	2.75e8		< 3.38e8
INFLAMMATORY & AUTOIMMUNE-RELATED BACTERIA			
Citrobacter spp.	<dl		< 5.00e6
* *Citrobacter freundii*	2.03e3		< 5.00e5
Klebsiella spp.	<dl		< 5.00e3
Klebsiella pneumoniae	<dl		< 5.00e4
M. avium subsp. paratuberculosis	<dl		< 5.00e3
Proteus spp.	<dl		< 5.00e4
Proteus mirabilis	<dl		< 1.00e3
COMMENSAL INFLAMMATORY & AUTOIMMUNE-RELATED BACTERIA			
Enterobacter spp.	2.52e6		< 5.00e7
Escherichia spp.	2.01e9		< 3.80e9
Fusobacterium spp.	9.24e5		< 1.00e8
Prevotella spp.	2.70e7		< 1.00e8

FUNGI/YEAST

FUNGI/YEAST	Result	Reference
Candida spp.	<dl	< 5.00e3
Candida albicans	<dl	< 5.00e2
Geotrichum spp.	<dl	< 3.00e2
Microsporidium spp.	<dl	< 5.00e3
Rhodotorula spp.	<dl	< 1.00e3

VIRUSES

VIRUSES	Result	Reference
Cytomegalovirus	<dl	< 1.00e5
Epstein-Barr Virus	<dl	< 1.00e7

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PARASITES

PROTOZOA	Result	Reference
Blastocystis hominis	<dl	< 2.00e3
Chilomastix mesnili	<dl	< 1.00e5
Cyclospora spp.	<dl	< 5.00e4
Dientamoeba fragilis	<dl	< 1.00e5
Endolimax nana	<dl	< 1.00e4
Entamoeba coli	<dl	< 5.00e6
Pentatrichomonas hominis	<dl	< 1.00e2
WORMS		
Ancylostoma duodenale	Not Detected	Not Detected
Ascaris lumbricoides	Not Detected	Not Detected
Necator americanus	Not Detected	Not Detected
Trichuris trichiura	Not Detected	Not Detected
Taenia spp.	Not Detected	Not Detected

INTESTINAL HEALTH MARKERS

DIGESTION	Result	Reference
Steatocrit = fat in large colon,	<dl	< 15 %
Elastase-1 = enzymes. HCl	>750	> 200 ug/g
GI MARKERS		
β-Glucuronidase oestrogen dominance? or constipation?	2027	< 2486 U/mL
Occult Blood - FIT	<dl	< 10 ug/g
IMMUNE RESPONSE hyper inflated immune response		
Secretory IgA	2281 H	510 - 2010 ug/g
Anti-gliadin IgA gluten sensitivity	242 H	< 175 U/L
Eosinophil Activation Protein (EDN, EPX)	0.01	< 2.34 ug/g
INFLAMMATION		
Calprotectin	1	< 173 ug/g
ADD-ON TESTS leaky gut		
Zonulin	245.4 H	< 175 ng/g

after food sensitivity drives up zonulin

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looks more like mucosal tissue

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H. PYLORI ANTIBIOTIC RESISTANCE GENES

	Result	Reference
Amoxicillin	**N/A**	**Negative**
Genes associated with amoxicillin resistance		
PBP1A S414R	N/A	
PBP1A T556S	N/A	
PBP1A N562Y	N/A	

	Result	Reference
Clarithromycin	**N/A**	**Negative**
Genes associated with clarithromycin resistance		
A2142C	N/A	
A2142G	N/A	
A2143G	N/A	

	Result	Reference
Fluoroquinolones	**N/A**	**Negative**
Genes associated with fluoroquinolone resistance		
gyrA N87K	N/A	
gyrA D91N	N/A	
gyrA D91G	N/A	
gyrB S479N	N/A	
gyrB R484K	N/A	

	Result	Reference
Tetracycline	**N/A**	**Negative**
Genes associated with tetracycline resistance		
A926G	N/A	
AGA926-928TTC	N/A	

* GI-Revive (twice/day) heal + seal
add in. glutamine 10g/day.
probioned 50 } ?
Klora myces (SB 300)
* paleo fibre - 12 fibre blends - nourish akkermansia.
polyphenols in
* Zymegest. (has Betaine HCl)
* Alkalense → BiCarb/green drink.

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