All-in-One Microbial Test

Patient Name:		**Health Status:**		**Account #:**	
Owner's Name:		**Ordered by:**		**Sample ID:**	Mi233376005010
Breed:	Devon Rex	**Email:**		**Sample Type:**	Pharanx
Age:	0.9	**Hospital:**		**Received Date:**	
Species:	Cat	**Location:**		**Report Date:**	05/21/25

Potential Clinically Relevant Microbes Detected:

Listed are those bacteria and fungi detected in the specimen that are of potential clinical relevance. Results from this report should be considered together with additional clinical data gathered by the veterinarian (physical examination, medical history, cytology, etc.) as the microbes detected may or may not be the cause of the clinical condition. For a comprehensive list of all microorganisms detected in this specimen see page 3 of this report. Please consider that even commensals can become pathogenic in certain patients under certain circumstances. Further, novel or extremely rare pathogens may be found on page 3 for your consideration and clinical diagnosis.

1.Bacteria

Species Detected	AID*	Percentage (%)	Cells per Sample
Pasteurella multocida [1]	[Link]	62.83	2,300,000
Helicobacter marmotae [2]	--	29.68	1,100,000
Mycoplasma sp. [3][4]	[Link]	0.11	4,100

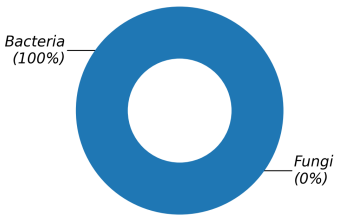
2.Fungi

No Known Fungal Pathogen Detected!

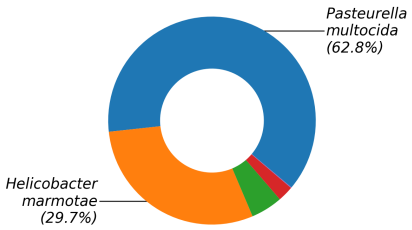
The number of cells per sample is subject to variations based on sampling technique applied to collect the sample. Following the sampling protocol closely is highly recommended. Less than 1000 cells of Bacteria or less than 10 cells of Fungi are often not clinically relevant unless poor sampling technique was applied, or lower sample volume was submitted.

* AID stands for Animal Infection Database. It is a resource center to provide more information for microbes in animal microbiome settings.

Microbial Overview:



Bacteria vs Fungi



Bacteria

No fungi detected!

Bacteria vs Fungi: the relative abundance between Bacteria and Fungi. **Bacteria**: the percentage profile of bacterial species alone. **Fungi**: the percentage profile of fungi species alone. Each color represents a species. The larger the colored segment is, the more abundant the species is.

Please find a tutorial about how to interpret a MiDOG report at: *https://www.youtube.com/watch?v=wsWUrZfnNb8*

Antimicrobial Resistance for Detected Clinically Relevant Microbes

The sample was screened for antibiotic resistance genes and intrinsic resistances. Please follow antimicrobial stewardship guidelines for cautious antibiotic use.

Drug Tiers*	Antibiotics	*Pasteurella multocida* (62.8 %)	*Helicobacter marmotae* (29.7 %)	*Mycoplasma sp.* (0.1 %)	Suggested Dose†	Drug Delivery
1st	Cefazolin	-	-	R	15 mg/kg, q 12 hrs	IV, SC
	Cephalothin	-	-	-	4-20 mg/kg, q 8 hrs	PO
	Cephalexin	-	-	R	22 mg/kg, q 12 hrs	PO
	Cefadroxil	G	-	R	22 mg/kg, q 12 hrs	PO
	Cefoxitin	-	-	R	15 mg/kg, q 12 hrs	IV, SC
	Penicillin	G	-	R	8-10 mg/kg, q 8 hrs	PO
	Penicillin G	G	-	R	--	--
	Oxacillin	-	-	R	22 mg/kg, q 8 hrs	IV
	Ampicillin	G	-	R	22 mg/kg, q 8 hrs	IV, SC
	Amoxicillin	G	G	R	22 mg/kg, q 8 hrs	PO
	Clavamox	-	-	R	13.75 mg/kg, q 12 hrs	PO
	Gentamicin	R	-	G	6 mg/kg, q 24 hrs	IV, SC
	Tobramycin	R	-	G	--	IV/Topical Use
	Neomycin	R	-	R	--	Topical Use
	Clindamycin	-	-	G	5.5 mg/kg, q 12 hrs	PO
	Lincomycin	-	-	G	15-25 mg/kg, q 24hrs	PO
	Doxycycline	R	-	G	5 mg/kg, q 12 hrs	PO
	Minocycline	R	-	-	10 mg/kg, q 12 hrs	PO
	Tetracycline	R	-	G	20 mg/kg, q 12 hrs	PO
	Sulfonamide	-	-	-	30 mg/kg, q 12 hrs	PO
	Trimethoprim-sulfamethoxazole	-	-	R	15-30 mg/kg, q 24 hrs	PO
	Metronidazole	-	-	R	10 mg/kg, q 8 hrs	IV
	Cefovecin	-	-	-	8 mg/kg, once	SC
2nd	Cefpodoxime	-	-	-	5 mg/kg, q 24 hrs	PO
	Ceftiofur	-	-	-	2.2 mg/kg, q 24 hrs	SC
	Timentin	-	-	-	--	Topical Use
	Azithromycin	R	-	G	5 mg/kg q 12 hrs	PO
	Orbifloxacin	-	-	-	2.5-7.5 mg/kg, q 24 hrs	PO
	Chloramphenicol	-	-	-	35 mg/kg q 8 hrs	PO
	Florfenicol	-	-	-	20 mg/kg, q 12 hrs	PO
3rd	Amikacin	R	-	G	15 mg/kg, q 24 hrs	IV, SC
	Rifampin	-	-	-	5-10 mg/kg, q 12 hrs	PO
	Imipenem	-	-	R	10 or 20 mg/kg, q 8 hrs	--
	Levofloxacin	-	-	G	10-30 mg/kg, q 24 hrs	IV/PO
	Marbofloxacin	-	-	G	2.75-5.5 mg/kg, q 24 hrs	PO
	Pradofloxacin§	-	-	G	3.0 mg/kg, q 24 hrs	PO
	Enrofloxacin	-	-	G	5 mg/kg, q 24 hrs	PO
	Ciprofloxacin§¶	-	-	G	--	Topical Use
	Ceftazidime	-	-	R	3-30 mg/kg, q 6-8 hrs	IV
	Mupirocin	-	-	-	--	Topical Use
	Nitrofurantoin	-	-	-	4.4-5mg/kg, q 24 hrs	PO
	Colistin	-	-	-	8-9g/kg, q 24 hrs	PO
	Ticarcillin	-	-	-	3.1 g, q 4-6 hrs	IV
	Piperacillin-Tazobactam	-	-	-	90 mg/kg, 30min q 8 hrs	IV

Abbreviation Keys and Symbols:

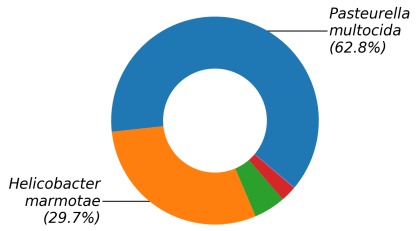
R	Not Recommended (Due to either Resistance Genes Detected, Intrinsic Resistance, or < 10% Effectiveness in Antibiogram Studies)
P	Poor Performance (< 50% Effectiveness in Antibiogram Studies)
F	Fair Performance (< 75% Effectiveness in Antibiogram Studies)
G	Good Performance (> 75% Effectiveness in Antibiogram Studies)
-	No Antibiotic Resistance Detected Based on the MiDOG Analysis

PO	Oral, by mouth
IV	Intravenous Injection
SC	Subcutaneous Injection
TU	Topical Use
--	No Info

*	Antibiotic Drug Tiers for Companion Animals, Antimicrobial Resistance and Stewardship Initiative, University of Minnesota
†	Dosis may vary based on patient species and/or type of infection. Reference at: www.midogtest.com/antibiotics
§	Contraindicated in animal patients
¶	Variable bioavailability in animal patients

Supplemental Data

Total Bacteria Composition



Your Sample

Species Detected	AID*	Percentage (%)	Cells per Sample
Pasteurella multocida [1]	[Link]	62.83	2,300,000
Helicobacter marmotae [2]	--	29.68	1,100,000
(c)Chitinophagia sp.	--	4.94	180,000
(f)Defluviitaleaceae sp.	--	2.44	89,000
Mycoplasma sp. [3][4]	[Link]	0.11	4,100

Total Fungal Composition

No Fungi Detected!

Donut plots above depict the relative abundance of all detected Bacterial or fungal species. Each color represents a different species. The larger the colored segment is, the more abundant that species is in the specimen.

The tables above lists top 8 bacterial/fungal species detected within the limit of detection. The absolute and relative abundances of each species is shown. Potential clinically relevant microbes are highlighted in red.

* AID stands for Animal Infection Database. It is a resource center to provide more information for microbes in animal microbiome settings.

Antimicrobial Resistance Genes Detected

The table below lists antimicrobial resistance genes that are detected in this sample. For antibiotics usage guidance, please first refer to the "Antibiotic Resistance" table shown in Page 2. Use this table only as an additioanl resource when needed. Inferring antibiomicrobial resistance from the resistance genes detected should be cautious, espeically in a mixed microbial population.

AMR_Gene_Detected	Resistance_Against	Function
ANT(2")-Ia	aminoglycoside	aminoglycoside nucleotidyltransferase
APH(3')-Ia	aminoglycoside	aminoglycoside phosphotransferase
APH(6)-Id	aminoglycoside	aminoglycoside phosphotransferase
APH(3")-Ib	aminoglycoside	aminoglycoside phosphotransferase
APH(3')-IIIa	aminoglycoside	aminoglycoside phosphotransferase
mphC	macrolide	macrolide phosphotransferase
mphD	macrolide	macrolide phosphotransferase
mecA	monobactam, carbapenem, cephalosporin, cephamycin, penam, penem	penicillin-binding protein 2a
ermX	streptogramin, macrolide, lincosamide	ribosomal RNA methyltransferase
ermB	streptogramin, macrolide, lincosamide	ribosomal methylase
sul1	sulfonamide	dihydropteroate synthase
tetWNW	tetracycline	ribosomal protection protein

References

1. Muller and Kirk's small animal Dermatology, 7th edition Elsevier
2. Kubota-Aizawa, Sanae, et al. Epidemiological study of gastric Helicobacter spp. in dogs with gastrointestinal disease in Japan and diversity of Helicobacter heilmannii sensu stricto. The Veterinary Journal. 225 (2017): 56-62.
3. Ramos R., Ramos C., Araujo F., Oliveira R., Souza I., Pimentel D., Galindo M., Santana M., Rosas E., Faustino M., Alves L. Molecular survey and genetic characterization of tick-borne pathogens in dogs in metropolitan Recife (north-eastern Brazil). (2010) Parasitology Research, 107(5):1115-1120
4. Kaczorek, Edyta, et al. Prevalence of reiratory pathogens detected in dogs with kennel cough in Poland. (2017) Acta Veterinaria Brno 85(4):329-336.

Methods

The MiDOG® All-in-One Microbial Test is a targeted, Next-generation DNA sequencing testing service able to identify molecular signatures unique to the identity and character of a specific microorganism. This test relies on safeguarded preservation and transport of collected samples, thorough extraction of DNA from all microbes present in the specimen, select amplification of microbial DNA followed by Next-generation DNA sequencing using the latest technologies from Illumina (Illumina, Inc., San Diego, CA). Data handling is done via curated microbial databases to accurately align DNA sequences to ensure precise and accurate (species-level) identification of all bacteria and fungi present in the specimen.

When no Bacterial or Fungal Species are Detected:

When no bacterial or fungal species are detected in this test, this result may be due to a very low microbial load and/or low concentration of microbial DNA in the sample provided. In this case, we recommend re-sampling the area of interest and re-submitting specimen for analysis.

Phylogenetic Rank Abbreviations

If the detected bacterial or fungal taxon could not be identified down to the genus level, the closest phylogenetic rank identified is provided. An abbreviation indicating the level of the rank is displayed aside. The meaning of the abbreviations is shown as:(p) Phylum level, (c) Class level, (o) Order level, and (f) Family level.

Disclaimer

The information contained in this MiDOG® report is intended only to be factor for use in a diagnosis and treatment regime for the animal patient. As with any diagnosis or treatment regime, you should use clinical discretion with each animal patient based on a complete evaluation of the animal patient, including history, physical presentation and complete laboratory data, including confirmatory tests. All test results should be evaluated in the context of the patients individual clinical presentation. The information in the MiDOG ® report has not been evaluated by the FDA.

Customer Support

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Need help understanding your report? We offer free consultations!

You can request a veterinary consultation through your MiDOG portal account, by email, or by phone.

Have technical questions? Just give us a call to talk to our support team.