Lab Dept: SEROLOGY

Test Name: FUNGITELL, SERUM

General Information

Lab Order Codes:	FUNGS
Synonyms:	Beta-D glucan; BDG
CPT Codes:	87449 – Infectious agent detection by immunoassay technique, qualitative or semi-quantitative
Test Includes:	Fungitell reported as a quantitative result (pg/mL) and qualitative result.

Logistics

Test Indications:	Aids in the diagnosis of invasive fungal species. The Fungitell ß-D Glucan assay detects (1,3)- ß-D-glucan from the following pathogens*: Candida* spp., *Aspergillus* spp., *Coccidioides immitis, Fusarium* spp*., Pneumocystis jiroveci* among others.
Lab Testing Sections:	Serology - Sendouts
Referred to:	Mayo Medical Laboratories (Mayo Test: SFUNG)
Phone Numbers:	MIN Lab: 612-813-6280 STP Lab: 651-220-6550
Test Availability:	Daily, 24 hours
Turnaround Time:	1 - 3 days
Special Instructions:	Specimen cannot be shared with other testing. DO NOT remove tube cap. One Gold SST is required for testing.

Specimen

Specimen Type:	Blood
Container:	Gold SST (3.5 mL)
Draw Volume:	3 mL (Minimum: 1.5 mL) in a gel separator tube (SST)
Processed Volume:	Same as Draw Volume

Collection:	Routine venipuncture
Special Processing:	Lab Staff: Centrifuge specimen. **Do Not open tube**. Freeze in original container after centrifugation. Specimen cannot be shared with other tests. Specimen should be stored and shipped frozen. Forward promptly.
Patient Preparation:	None
Sample Rejection:	Specimens other than those listed in the specimen information, mislabeled or unlabeled samples

Interpretive

Reference Range:	Negative: Less than 60 pg/mL
Critical Values:	N/A
Limitations:	● (1,3)-beta-D-glucan (BDG) is not present in the Mucorales (eg, *Absidia*, *Mucor*, and *Rhizopus*), *Cryptococcus* species or *Blastomyces* species. Therefore, invasive fungal infection with either of these agents will lead to a negative BDG result. ● BDG results should be interpreted alongside other diagnostic testing results, including culture, molecular assays and/or serology. ● False-positive BDG results have been documented in patients having undergone recent hemodialysis, those that have received certain fractionated blood products (eg, albumin, immunoglobulins) and those who have had exposure to high amounts of glucan-containing gauze during surgery. BDG levels normalize approximately 3 to 4 days following these events. ● Single time-point testing with the BDG assay is associated with limited clinical sensitivity and specificity. Serial testing, at least 2 times per week, is associated with a higher diagnostic odds ratio (DOR 112) for the presence of an invasive fungal infection in an at-risk patient compared to single time-point positive result (DOR 16) ● The BDG assay does not identify or indicate the presence of a specific fungal organism. ● Serial testing to document BDG levels may be used to monitor disease progression and response to therapy, however, data on the clinical utility and accuracy of this practice is limited.
Methodology:	Protease Zymogen-Based Colorimetric Assay based on the Limulus Amebocyte Lysate (LAL) Pathway.
References:	Mayo Clinic Laboratories September 2019

Updates:	9/12/2019: Testing moved from Viracor to in-house test at Mayo. 1/21/2020: Updated volume requirements