

## CLINICAL SPECIFICATIONS

### CANDIDA ALBICANS

#### Pathogen Type:

*Candida albicans* (*C. albicans*) is a diploid fungus that grows both as yeast and filamentous cells. *C. albicans* is part of the commensal gut flora comprising microorganisms that colonize in all segments of the gastrointestinal tract, vagina and skin of humans.

#### Associated With:

Candidiasis<sup>1</sup>  
Migraine headache<sup>2</sup>  
Celiac disease<sup>3,4</sup>

**Known Cross-Reactions:** α-gliadin, γ-gliadin;<sup>3,4</sup> placenta, ovary, thyroid, liver, pancreas, spleen, brain;<sup>5</sup> *Saccharomyces cerevisiae*<sup>6</sup>

#### Clinical Significance:

The detection of antibodies to *C. albicans* indicates the patient has increased risk of gastrointestinal disorders and multiple extra-intestinal autoimmunities. *C. albicans* is present in the oral cavity of up to 75% of the population.<sup>7,8</sup> For most of the population *C. albicans* is benign, but for some *C. albicans* can colonize in the mucosa and even penetrate gastrointestinal tissues.<sup>9,10</sup> The potential for systemic *Candida* to ignite autoimmunity is high due to the homology between the fungus and multiple human tissues.<sup>5</sup> When a comparison of anti-*Candida* IgG antibodies in healthy controls versus patients with autoimmune reactivity was conducted, only 10% of healthy controls showed elevation in *C. albicans* antibody, while *C. albicans* antibodies were present in 60% of tissue antibody positive individuals.<sup>4</sup> *Candida* infection is also considered a trigger of Celiac disease. Corouge *et al*<sup>3</sup> found higher levels of anti-*Candida* hyphal wall protein-1 and anti-gliadin antibodies in patients with *Candida* infection (CI) and CD than healthy controls, but no significant differences between CI and CD patients. CI and CD patients also had higher levels of tissue transglutaminase-2 IgA than controls. During CI, the increase in specific *Candida* antibodies paralleled the increase in gliadin antibodies.

This array tests for IgG immune reactivity associated with *Candida albicans*. This is not a measurement of acute infection. Equivocal or out-of-range results indicate IgG antibody reactivity to the tested antigen. We tested 288 blood donor sera against *C. albicans* antigens at optimal dilution, 16% of these donors were IgG reactive.

#### References:

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