CYREX® Laboratories

CLINICAL SPECIFICATIONS

ASPERGILLUS

Pathogen Type:

Aspergillus is the genus of asexual spore-forming mold species common in many climates. It is found in soil, water and air especially in and around water-damaged buildings. Array 12 assesses immune reactivity to *Aspergillus fumigatus*, *Aspergillus niger and Aspergillus flavus*.

Associated With:

Aspergillosis[1,2,3]
Allergic bronchopulmonary aspergillosis[1,2]
Respiratory disorders[3,4]
Rheumatic disease[5]
Autoimmune inner ear disease, Meniere's disease, tinnitus[6]
Thrombosis[7]
Infarction[8]

Known Cross-Reactions:

Stachybotrys chartarum, *Penicillium notatum*;[9] cochlin;[6] ribonucleoprotein[10]

Clinical Significance:

The detection of antibodies to *Aspergillus* indicates the patient has increased risk of chronic fatigue syndrome, fibromyalgia, a variety of autoimmunities including neuroautoimmunity. The genus *Aspergillus*, which includes nearly identified 200 species, including *fumigatus*, *niger* and *flavus*, has a tremendous impact on public health both beneficially, in numerous industrial applications,[11,12] and negatively, as a pathogen.[13] The most common mode of invasion is via inhalation. Molds, through the production of enzymes such as serine chymotrypsin-like proteinase, cleaves lungs and gut barrier proteins and then finds their way into the blood. In the blood, immune system reaction against them results in the release of proinflammatory cytokines and the production of antibody against mold antigens. The molds and their mycotoxins, enzymes and proinflammatory cytokines alter the blood brain barrier function and allow for the entry of autoreactive T-helper 1 (Th1), Th17 and antibodies into the nervous system causing damage to microglia, astrocytes and neurons, which leads to the neuroautoimmunity commonly seen in patients exposed to molds.

This array tests for IgG immune reactivity associated with *Aspergillus*. 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 *Aspergillus* antigens at optimal dilution, 18% of these donors were IgG reactive.

References:

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