

## CLINICAL SPECIFICATIONS

### AMARANTH

**Antigen Made From:**

Amaranth flour

**Associated With:**

 Allergy<sup>1</sup>

**Known Cross-Reactions:** Quinoa, Rice, Sunflower;<sup>2</sup> Insulin, Glutamic Acid Decarboxylase-65;<sup>5</sup> Triiodothyronine (T3)<sup>6</sup>

**Clinical Significance:**

The presence of antibodies to Amaranth is an indication of food immune reactivity. The offending food and its known cross-reactive foods should be eliminated from the diet. Amaranth is considered a beneficial food, especially for patients with cardiovascular disease and hypertension, due to its ability to reduce blood pressure and cholesterol.<sup>3,4</sup> Amaranth is also an excellent anti-oxidant.<sup>3,4</sup> Amaranth labeled by the scientific community as a non-allergenic food, however, allergy to Amaranth has been reported.<sup>1</sup> If a recently diagnosed gluten-reactive patient exhibits high levels of antibodies to Amaranth, it may be due to the late introduction of Amaranth into the diet.

**References:**

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2. Aphalo et al. Surface physicochemical properties of globulin-P amaranth protein. J Agric Food Chem, 2004; 52:616-622.
3. Czerwiński et al. Oat (Avena sativa L.) and amaranth (Amaranthus hypochondriacus) meals positively affect plasma lipid profile in rats fed cholesterol-containing diets. J Nutr Biochem, 2004; 15:622-629.
4. Martirosyan et al. Amaranth oil application for coronary heart disease and hypertension. Lipids Health Dis, 2007; 6(1):1-12.
5. Kharrazian, et al. Detection of islet cell immune reactivity with low glycemic index foods: is this a concern for type 1 diabetes? J Diabetes Res, 2017; 2017:4124967.
6. Kharrazian, et al. Immunological reactivity using monoclonal and polyclonal antibodies of autoimmune thyroid target sites with dietary proteins. J Thyroid Res, 2017; 2017:4354723.