

FUNCTIONAL VERSUS CROSS-REACTIVE ANTIBODY-ANTIGEN RESPONSES

FUNCTIONAL IMMUNE RESPONSE

Reactive

GLIADIN
ANTIBODY

1

GLIADIN
ANTIGEN

Complete binding
of antigen to
antibody

Non-Reactive

GLIADIN
ANTIBODY

3

SWEET POTATO
ANTIGEN

Insufficient binding
of antigenic
determinants

Cross-Reactive

GLIADIN
ANTIBODY

2

CASEIN
ANTIGEN

Partial binding
of antigenic
determinants

DYSFUNCTIONAL IMMUNE RESPONSE

GLUTEN-ASSOCIATED CROSS-REACTIVE FOODS & FOODS SENSITIVITY™



2 mL serum

- Rye, Barley, Spelt, Polish Wheat IgG + IgA Combined
- Cow's Milk IgG + IgA Combined
- Alpha-Casein & Beta-Casein IgG + IgA Combined
- Casomorphin IgG + IgA Combined
- Milk Butyrophilin IgG + IgA Combined
- Whey Protein IgG + IgA Combined
- Chocolate (Milk) IgG + IgA Combined
- Oats IgG + IgA Combined
- Yeast IgG + IgA Combined
- Coffee IgG + IgA Combined
- Sesame IgG + IgA Combined
- Buckwheat IgG + IgA Combined
- Sorghum IgG + IgA Combined
- Millet IgG + IgA Combined
- Hemp IgG + IgA Combined
- Amaranth IgG + IgA Combined
- Quinoa IgG + IgA Combined
- Tapioca IgG + IgA Combined
- Teff IgG + IgA Combined
- Soy IgG + IgA Combined
- Egg IgG + IgA Combined
- Corn IgG + IgA Combined
- Rice IgG + IgA Combined
- Potato IgG + IgA Combined

CLINICAL USE:

- Identify additional dietary proteins to which the Non-Celiac Gluten Sensitive (NCGS) or Celiac disease (CD) patient is sensitized
- Detect cross-reactions in the patient non-responsive on a gluten-free diet
- Categorize the 1-in-2 NCGS or CD patient who is also sensitive to dairy products

RECOMMENDED FOR PATIENTS WHO:

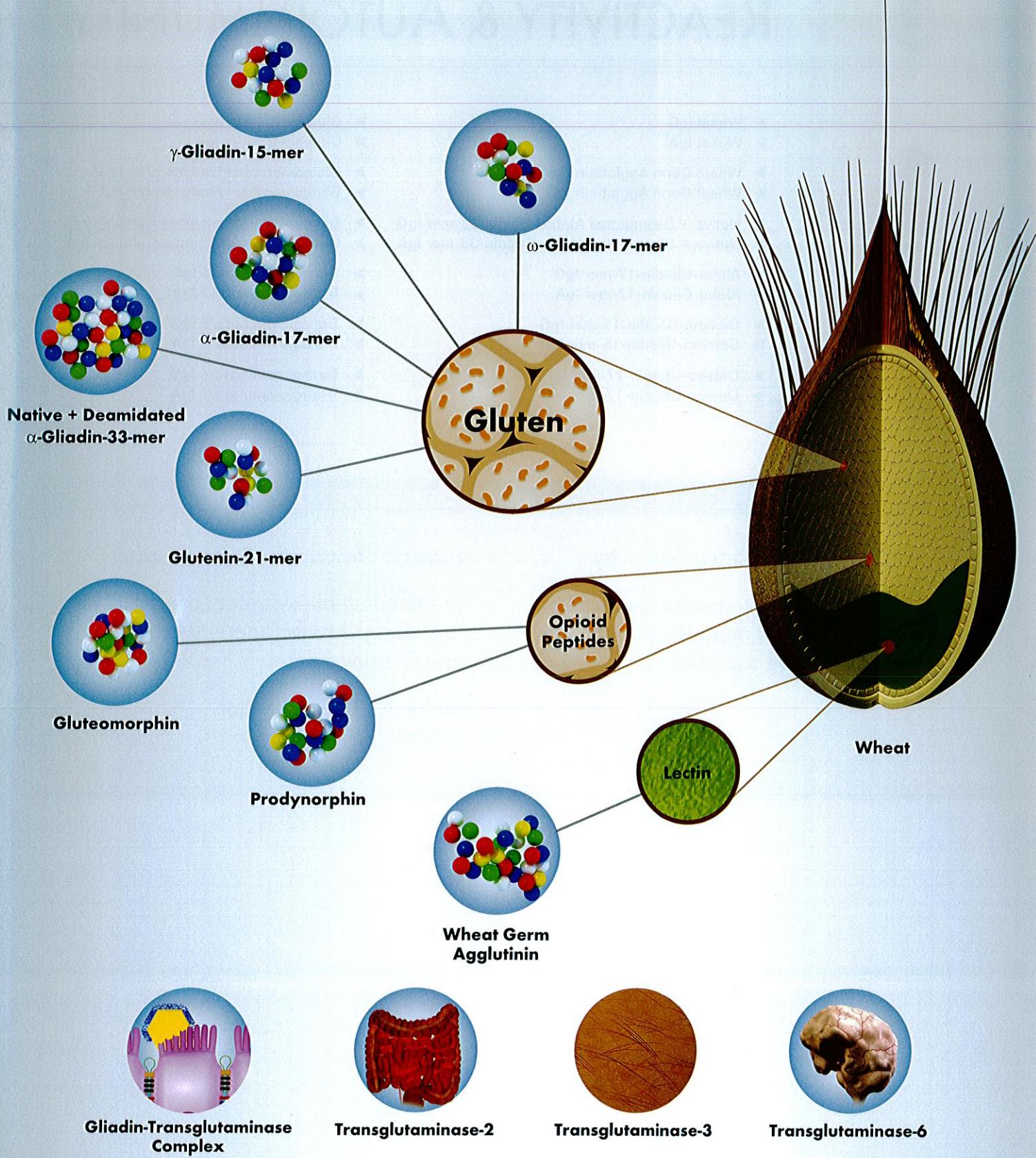
- Have Non-Celiac Gluten Sensitivity or Celiac disease
- Are experiencing limited improvements or are non-responsive on a gluten-free diet
- Have gut dysbiosis, which appears to be resistant to standard therapy


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WHEAT

PROTEINS • ENZYMES • PEPTIDES



ARRAY

3

WHEAT/GLUTEN PROTEOME REACTIVITY & AUTOIMMUNITY™



2 mL serum

- ▶ Wheat IgG
- ▶ Wheat IgA
- ▶ Wheat Germ Agglutinin IgG
- ▶ Wheat Germ Agglutinin IgA
- ▶ Native + Deamidated Alpha-Gliadin-33-mer IgG
- ▶ Native + Deamidated Alpha-Gliadin-33-mer IgA
- ▶ Alpha-Gliadin-17-mer IgG
- ▶ Alpha-Gliadin-17-mer IgA
- ▶ Gamma-Gliadin-15-mer IgG
- ▶ Gamma-Gliadin-15-mer IgA
- ▶ Omega-Gliadin-17-mer IgG
- ▶ Omega-Gliadin-17-mer IgA
- ▶ Glutenin-21-mer IgG
- ▶ Glutenin-21-mer IgA
- ▶ Gluteomorphin+Prodynorphin IgG
- ▶ Gluteomorphin+Prodynorphin IgA
- ▶ Gliadin-Transglutaminase Complex IgG
- ▶ Gliadin-Transglutaminase Complex IgA
- ▶ Transglutaminase-2 IgG
- ▶ Transglutaminase-2 IgA
- ▶ Transglutaminase-3 IgG
- ▶ Transglutaminase-3 IgA
- ▶ Transglutaminase-6 IgG
- ▶ Transglutaminase-6 IgA

CLINICAL USE:

- Accurately identify Gluten Reactivity
- Measure antibody production against 9 wheat proteins and peptides and 3 essential structure enzymes

RECOMMENDED FOR PATIENTS WHO:

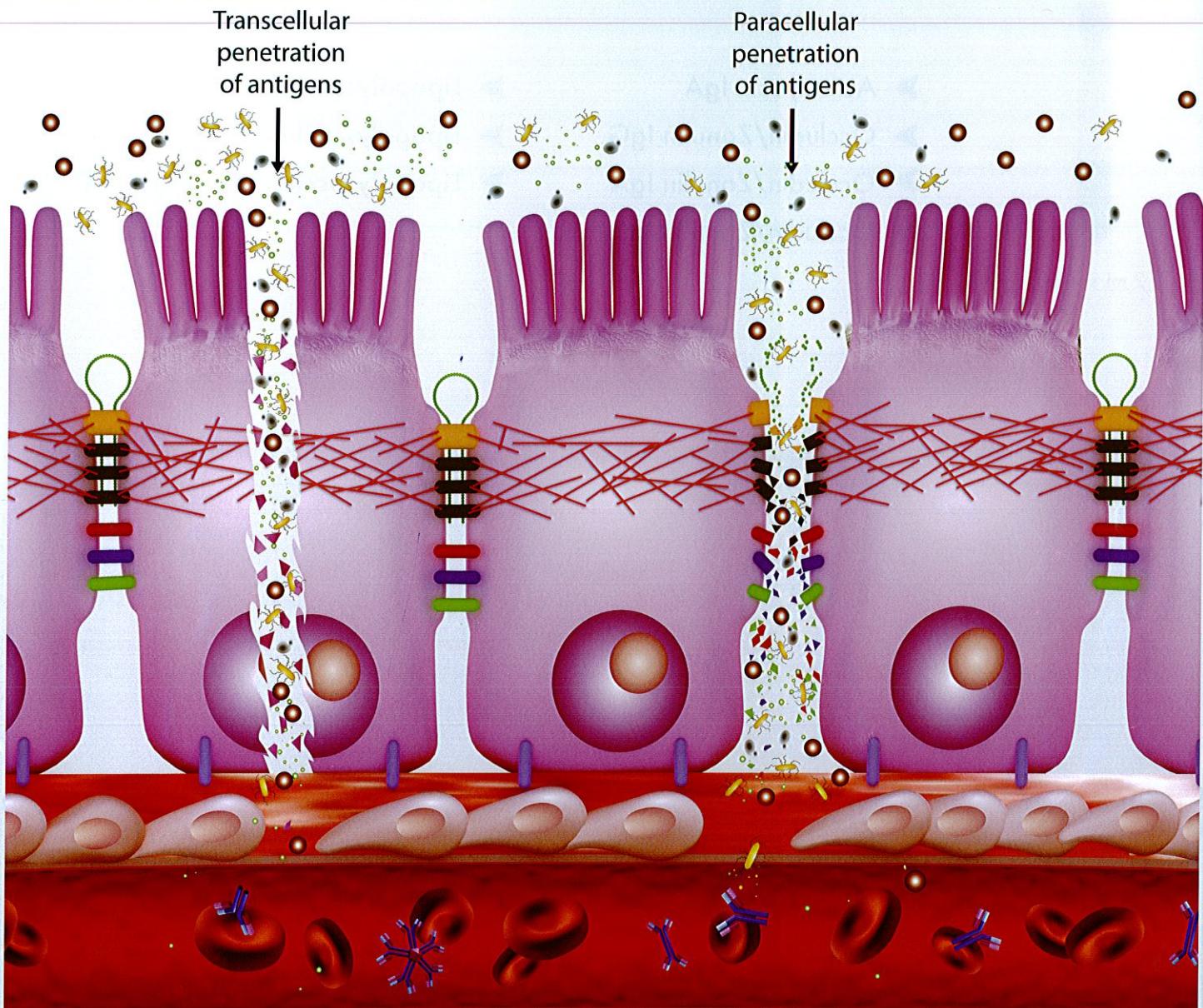
- Have non-responsive GI symptoms
- Present multiple-symptom complaints (including Chronic Fatigue Syndrome and Fibromyalgia)
- Suffer from depression or neuro-autoimmunity



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TRANSCELLULAR & PARACELLULAR ROUTES OF INTESTINAL BARRIER PENETRATION



Antigens Measured	Triggers of Barrier Breakdown
 Actomyosin Proteins	 Parasites
 Occludin/Zonulin Proteins	 Viruses
 Lipopolysaccharides	 Yeast

ARRAY
2

INTESTINAL ANTIGENIC PERMEABILITY SCREEN™



2 mL serum

- Actomyosin IgA
- Occludin/Zonulin IgG
- Occludin/Zonulin IgA
- Occludin/Zonulin IgM
- Lipopolysaccharides (LPS) IgG
- Lipopolysaccharides (LPS) IgA
- Lipopolysaccharides (LPS) IgM

CLINICAL USE:

- Measure intestinal permeability to large molecule which inflame the immune system
- Identify the damaging route through the intestinal barrier

RECOMMENDED FOR PATIENTS WHO:

- Present multiple symptom complaints (including Chronic Fatigue Syndrome)
- Suffer from abnormal immune cell count and function (including autoimmune diseases)
- Complain of food allergy and intolerance



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BARRIERS TO MACROMOLECULAR ABSORPTION

L U M E N

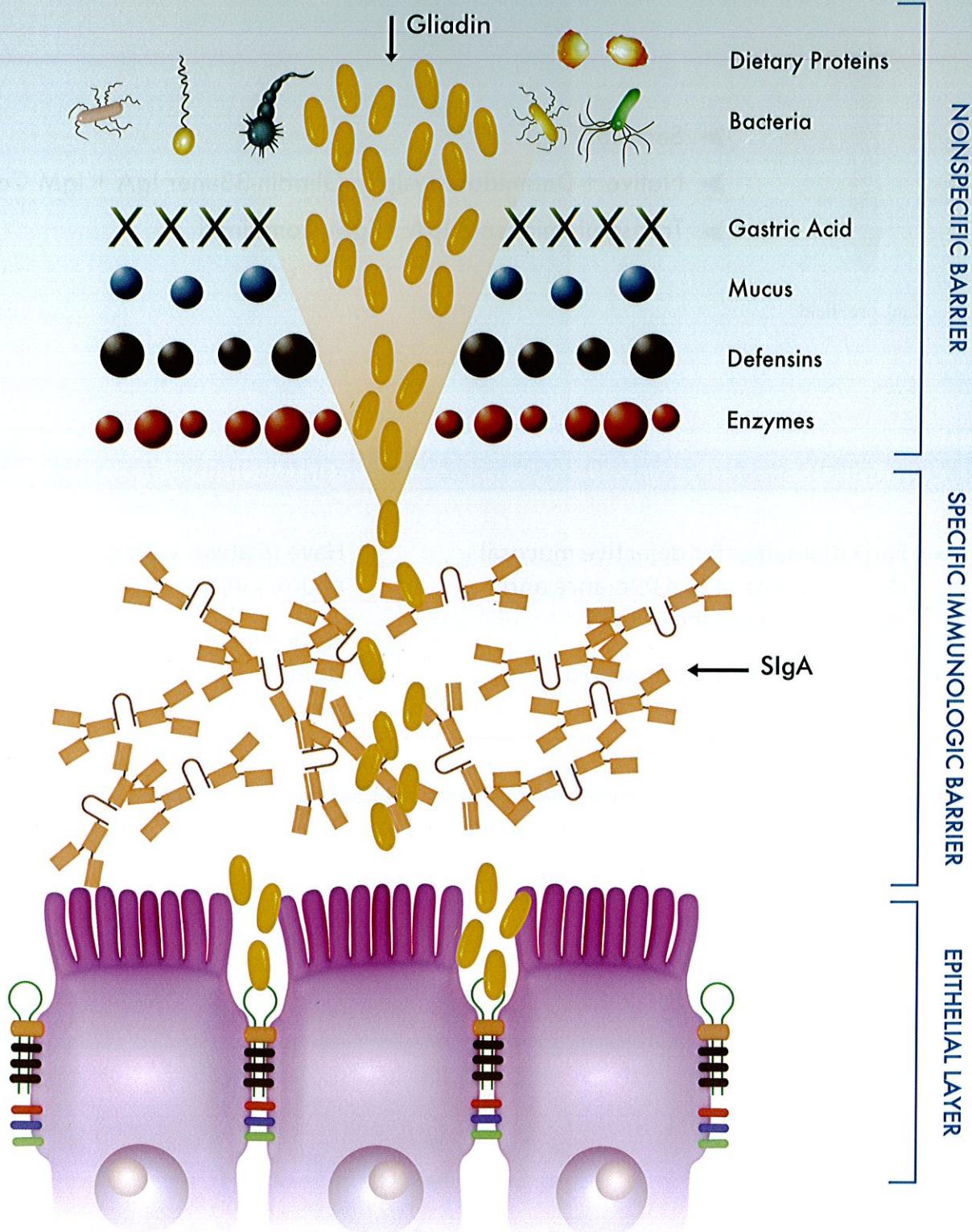


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ARRAY

1

MUCOSAL GLUTEN REACTIVITY SCREEN™



2 mL oral fluid

- Secretory IgA
- Native + Deamidated Alpha-Gliadin-33-mer IgA + IgM Combined
- Transglutaminase-2 IgA + IgM Combined

CLINICAL USE:

- Early biomarker for defective mucosal immunity, loss of oral tolerance and autoimmunity in the GI tract
- Monitoring compliance with a gluten-free diet

RECOMMENDED FOR PATIENTS WHO:

- Have relatives with gluten reactivity and/or Celiac disease—especially children
- Have a family history of autoimmune disease



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