Rabbit Anti-Gliadin Polyclonal: RC0048

Intended Use: For Research Use Only

Description: Gliadins, from an alcohol-soluble fraction of gluten, are storage glycoproteins found in wheat, barley, and rye. All gliadins have a high glutamine and proline content. Glutenins are insoluble in alcohol and differ in their biochemical structure from glutens. Gluten is responsible for the elasticity of kneaded dough, which allows it to be leavened. Gliadin is also found in a variety of foods as well as in beer, along with the glycoprotein Hordein. Induction of zonulin release in intestinal epithelial cells is triggered by Gliadin. This causes an activation of the zonulin pathway by PKC mediated cytoskeleton reorganization and tight junction opening leads to a rapid increase in intestinal permeability to macromolecules. Individuals with disorders such as celiac disease or Crohn's disease are sensitive to Gliadin since they lack the enzyme necessary for its digestion and cannot tolerate it in their diet.

Specifications

Clone:	Polyclonal
Source:	Rabbit
Isotype:	IgG
Reactivity:	Wheat
Immunogen:	KLH conjugated synthetic peptide derived from wheat Gliadin (231-296/296 aa)
Localization:	Cytoplasm; major seed storage protein in wheat
Formulation:	Antibody in PBS pH7.4, containing BSA and ≤ 0.09% sodium azide (NaN3)
Storage:	Store at 2°- 8°C
Applications:	IHC, ELISA, ICC/IF

Package:

Description	Catalog No.	Size
Gliadin Polyclonal Concentrated	RC0048	1 ml

IHC Procedure*

Positive Control Tissue:	Wheat
Concentrated Dilution:	10-100
Pretreatment:	Tris EDTA pH9.0, 15 minutes Pressure Cooker or 30-60 minutes water bath at 95°-99°C
Incubation Time and Temp:	Overnight @ 4°C
Detection:	Refer to the detection system manual

* Result should be confirmed by an established diagnostic procedure.

References:

1. Immunohistochemical analysis of intestinal biopsies in individuals with celiac disease. Adel Alhabbal, et al. Journal of Gastroenterology and Hepatology. August 26, 2022.
2. The In Vitro Effects of Enzymatic Digested Gliadin on the Functionality of the Autophagy Process. Manai F., et al. Int J Mol Sci 19:N/A, 2018.
3. Towards Celiac-safe foods: Decreasing the affinity of transglutaminase 2 for gliadin by addition of ascorbyl palmitate and ZnCl2 as detoxifiers. Engstrom N., et al. Sci Rep 7:77, 2017.
4. Antibody responses to deamidated gliadin peptide show high specificity and parallel antibodies to tissue transglutaminase in developing coeliac disease. M Ankelo, et al. Clin Exp Immunol. Nov; 150(2): 285–293, 2007.
5. Production of antibodies to gliadin in intestinal mucosa of patients with coeliac disease: a study at the single cell level. Lycke N., et al. Europe PMC, 01 Jan. 1989.

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