

Cat# **SP-89924-1**

Description: α-Gliadin (57–89) [Ac-LQL QPF PQP ELP YPQ PQL PYP QPQ LPY PQP QPF-NH₂; mol wt 3953.5), 33-aa, deamidated antigen for celiac disease]

Size: 1 mg

Purity: >95%

Store: Desiccated at -20oC.

Celiac disease (CD)3 is a common food-sensitive enteropathy in humans. In CD patients, the ingestion of wheat gluten, and of homologous proteins of barley and rye, induces pronounced T cell-mediated inflammatory reactions, mainly in the small intestine. The marked genetic association with HLA class II genes and the isolation of gluten-reactive, HLA-DQ2/DQ8-restricted CD4+ T cells from the intestinal mucosa of celiac patients have highlighted the key role of the adaptive T cell response in the CD lesion. Several T cell stimulatory peptides from α-gliadin, γ-gliadin, and glutenins have been identified using mass spectrometry analysis or by screening large peptide libraries. A key role for tissue transglutaminase (TG2) has been elucidated in deamidating gluten peptides to facilitate their binding to HLA-DQ2 and -DQ8 molecules. Despite the large number of immunogenic gluten peptides so far identified, the intestinal T cell responses in HLA-DQ2+ Norwegian CD patients are mainly focused on two overlapping peptides spanning the 57– 68 and 62–75 region of α-gliadin. The 57– 89 N-terminal region of certain α-gliadin proteins displayed the optimal T cell stimulatory capacity in a cohort of adult Scandinavian subjects. This 33-mer peptide, encompassing six copies of three reported T cell epitopes (DQ2-α-I, DQ2-α-II, and DQ2-α-III), is resistant to gastrointestinal proteolysis, does not require intracellular processing for presentation, and binds efficiently to HLA-DQ2. Therefore, the 33-mer peptide is considered an immunodominant T cell stimulatory gluten peptide in HLA-DQ2+ CD patients.

Refs. Camarca A (2009) J. Immunol. 182, 4158-4166; Arentz_hanser H (2009) Gastroenterol. 123, 803-809; Shan L (2002) Science 297, 2275-2279; Qiao SW (2004) 173, 1757-1762; Anderson Rp (2000) Nat. Med. 6, 337-342; Vader W (2002) Gastroenterol. 122, 1729-1737

Related Items

Catalog#	ProdDescription
3300-300-GLG	Human Anti-Gliadin IgG ELISA kit, 96 tests, Quantitative
3300-305-GLM	Human Anti-Gliadin IgM ELISA kit, 96 tests, Quantitative
3300-310-GLA	Human Anti-Gliadin IgA ELISA kit, 96 tests, Quantitative
GLDN11-S	Anti-Wheat Gliadin antiserum
GLDN15-N-1	Wheat Gliadin
SP-58780-1	α-Gliadin (57–73) [Gln-Leu-Gln-Pro-Phe-Pro-Gln-Pro-Glu-Leu-Pro-Tyr-Pro-Gln-Pro-Gln-Ser (MW: 1994.25)]
SP-88514-5	Gliadin (43-49)(Gliadorphin) Alpha (AA: Tyr-Pro-Gln-Pro-Gln-Pro-Phe) (MW: 875.99)
SP-89924-1	α-Gliadin (57–89) [Ac-LQL QPF PQP ELP YPQ PQL PYP QPQ LPY PQP QPF-NH ₂ ; mol wt 3953.5), 33-aa, deamidated antigen for celiac disease

SP-51684-1 120703A