Product Data Sheet

Product number **G005**
Revision number RN3.3

Product Name DGPx4

Synonym Deamidated Gliadin Peptide – fusion protein

Background info Detection of gliadin antibodies has been used for a long time in celiac disease diagnostics but suffered from a low specificity. This disadvantage was overcome by the introduction of deamidated gliadin peptides as antigen.

The rationale behind is that tissue transglutaminase catalyzes gliadin deamidation in the intestinal mucosa of celiac disease patients, resulting in deamidated gliadin peptides which are recognized by HLA receptors of immune cells. Therefore, deamidated gliadin antibodies are specific for celiac disease.

We introduced three different variations of deamidated gliadin antigens composed by a carrier protein linked with a combination of the deamidated 33-mer and 26-mer gamma gliadin peptides and the DQ2-GI- and DQ2-GII-peptides (Dørum S. et al., J Proteome Res. 2009; 8:1748-55).

Art. No.	Name	
G051	26mer gliadin peptide	Carrier – 26mer γ-gliadin
G052	33mer gliadin peptide	Carrier – 33mer α-gliadin
G055	Carrier protein control	Carrier
G007 / G060	DGPx1 (26mer DGP)	Carrier – 26mer γ-gliadin, deamidated
G054	33mer DGP	Carrier – 33mer α-gliadin, deamidated
G006	DGPx2	Carrier – 33mer α-gliadin, deamidated – 26mer γ-gliadin, deamidated
→ G005	DGPx4	Carrier – 33mer α-gliadin, deamidated – 26mer γ-gliadin, deamidated – DQ2-γ1 – DQ2-γ2

Description DGPx4 is a fusion protein of 2 different deamidated gliadin peptides and 2 DQ2-epitopes, fused with a carrier protein to be used as antigen for the detection of antibodies specific for deamidated gliadin. (Dørum S. et al., J Proteome Res. 2009; 8:1748-55).

Source Recombinantly produced in *E. coli*

Quantity 250 µg /1 mg / 5 mg

Molecular Weight 33 kDa (in SDS-PAGE corresponding band at 38 kDa)

Appearance White lyophilized solid.

Reagents DGPx4 is lyophilized from a solution of ~50 mM NaH_2PO_4, pH 6.8.

Reconstitution Add at least the volume of H_2O the protein is lyophilized from (see Certificate of Analysis) to the vial of lyophilized powder. Rotate vial gently until solid dissolves. After reconstitution the solution should be stored frozen in working aliquots.

Application The recombinant antigen is meant for solid (ELISA and immuno blot) and fluid phase diagnostic assays. The protein is bound by human type IgA and IgG (auto) antibodies.

Coating	Dilute with your coating buffer to an appropriate concentration e.g. 1 µg/ml. Please notice that coating conditions have to be evaluated carefully.
Storage	Store at -80°C. Stability is given for at least 3 years when stored at -80°C (see retest date on Certificate of Analysis), with potential to date extend after retesting. If storage at -80°C is not possible, storage at ≤ -20°C is recommended. Solutions of DGPx4 are stable for at least 2 years when stored at ≤ -20°C. Upon reconstitution, store undiluted working aliquots preferably at -80°C (if not possible at ≤ -20°C, see comment above). Avoid repeated freezing and thawing. ***Delivery is possible at ambient temperature***
Related products	G006: DGPx2 G007: DGPx1
NOTE	INTENDED FOR RESEARCH USE ONLY, NOT FOR USE IN HUMAN, THERAPEUTIC OR DIAGNOSTIC APPLICATIONS.