The G12 antibody is a new generation antibody that targets the toxic fragment that triggers the autoimmune reaction in celiac patients. The G12 antibody used in AgraStrip® Gluten was raised against the QPQLPY peptide from toxic fragment called 33-mer with peptide structure of LQLQPFPQPQLPYQPQLPYPQPQLPYPQPF of the gliadin protein present in gluten.

**Summary:**
- G12 antibody was raised against QPQLPY peptide (from 33mer) that triggers the immune response in celiac patients.
- G12 recognizes the toxic fraction of gliadin
- G12 is recommended for hydrolyzed food where the gliadin protein is degraded

There is an ongoing debate concerning the presence or absence of gluten in oats. In fact, current antibodies were not recommended for the detection of gluten in oats. The G12 antibody has shed light on this debate due to its specificity for the potentially toxic sequences present in oats. This is a more sensitive and selective method of testing compared to other techniques. In this regard, the Spanish Celiac Association has recently awarded the 6th National Prize for Research on Celiac Disease to a scientific team that used the G12 antibody to identify oat varieties containing low levels of gluten.

The **AgraStrip® Gluten** (Order No. COKAL0225AS) is a lateral flow test kit containing 25 strips, sample dilution solution, positive and negative control.

**Benefits:**
- Specific – monoclonal antibody detecting peptide sequences from gluten
- Sensitive – Limit of detection 15 ng/mL gliadin
- Customized – different cutoff levels due to different sample dilutions available
- Accurate – results are comparable with ELISA methods
- Rapid – 15 minutes assay method
- Stable – 12 months shelf-life
- Cost Effective – no expensive equipment needed
- User Friendly – easily train technicians in minutes
Procedure for AgraStrip® Gluten

IMPORTANT: Please read kit insert before running the test.

For sample extraction and dilution please refer to package insert or special applications.

Assay procedure:
1. Dip the strip test vertically in the test tube or vial containing the diluted sample without exceeding the immersion limit indicated by the arrows.

2. Wait for the liquid to reach the control zone.

3. Remove the strip from the test tube or vial and place it on a non-absorbent surface, preferably in a vertical position.

4. Read results after 10 minutes.

Result Interpretation

Negative result: One single blue line in the central part of the strip.

Positive result: One blue line and one red line in the result zone. The sample contains gluten higher than the cutoff level (variable according to sample dilution)

NOTE: The intensity of the red colored test line may vary depending on the concentration present in the sample.

Invalid result: No blue line appears.

References:

Structural basis for gluten intolerance in celiac sprue

Toward the assessment of food toxicity for celiac patients: characterization of monoclonal antibodies to a main immunogenic gluten peptide.

Sensitive detection of cereal fractions that are toxic to celiac disease patients by using monoclonal antibodies to a main immunogenic wheat peptide.

The Molecular Basis for Oat Intolerance in Patients with Celiac Disease