
NEWS

New BÜHLMANN CAST® Allergens available!

We are pleased to announce the new 9 BÜHLMANN CAST® Allergens that will reinforce our commitment in the allergy diagnosis. With this release we will strengthen our *Hymenoptera* venom portfolio with a new dedicated allergen for the European paper wasp, as well as we developed alpha GAL, a highly standardized allergen to address the new recognized red meat allergy syndrome, and we launch a total new group of allergen for BAT testing dedicated to spices and food ingredients.

Insect Venoms - European paper wasp

In the order *Hymenoptera* mainly 2 families sting people and are cause of allergic reactions from these stings: bees and the family *Vespidae*, to which belong wasps (*Polistes*), hornets (*Vespa/Dolichovespula*), and yellow jackets (*Vespula*). With the CAST® assay we are offering venom allergens covering all these species to support the primary sensitizing allergy diagnosis since years as well as the follow up of patients in venom immunotherapy (VIT) treatment in the format of an in vitro functional assay. The *Hymenoptera* venom allergy is a very dynamic field linked to the constant spreading of new species all over the world. Of note, *Polistes dominula*, also called European paper wasp, is an invasive, fast expanding species and can be found nowadays not only in the Mediterranean area and North Africa, but also in central and north Europe, the United States, Canada, Russia, China, Australia, Chile and the Baltic states. Due to its biological properties *Polistes dominula* is replacing endemic *Polistes* species. Up to date we offer *Polistes* spec. venom (BAG2-I4), which is a mixture from different American *Polistes* species that has a very low cross reactivity with the *Polistes dominula*. In order to meet this evolving situation in the *Hymenoptera* field and to improve diagnostic accuracy we launch a new *Polistes dominula* allergen, the BAG2-I77.

Food Allergy, Red Meat Allergy - alpha GAL

Galactose-alpha-1,3-galactose, or alpha GAL for short, is a delayed (but Type-I) allergy to mammal meat affecting a growing number of the population. In the last years it has been recognized as a new kind of food allergy by the scientific community. This new allergy is initially caused by a tick bite, which inoculates the alpha GAL epitope in the body that can induce sIgE production in the patient and subsequently develops into a delayed anaphylactic reaction after the consumption of red meat. Indeed red meat can have different extent of this specific carbohydrate structure that is not present in the human body and that can be presented as an antigen after digestion of the meat. Furthermore the alpha GAL epitope plays a crucial role for allergic reactions to certain biologicals, like the therapeutic antibody cetuximab. Severe allergic reactions to this antibody are also provoked by the alpha GAL epitope. The often poorly standardized material used for the diagnostic test may lead to misdiagnosis. BÜHLMANN is now offering a defined molecule to test a functional response to this allergen in a safe blood test.

Food Allergy, Spices and Food ingredients – garlic, coconut, paprika, curry, chili, coriander, curcuma.

Within this new allergens release we have introduced a new food allergy category, the spices, and added new food ingredients like garlic to the vegetables category and coconut to the nuts category. With these allergens we intend to address this emerging food allergy diagnosis needs with Flow CAST®.

Even if spices may uncommonly induce symptoms of food allergy in sensitized individuals, symptoms are usually mild but vary from itching and smarting of the lips and mouth to

anaphylaxis. Most allergic reactions produced by spices are the result of ingestion, and spices usually act as hidden allergens. Spices as hidden allergens are potentially very dangerous because minute amounts can cause systemic reactions and even an anaphylactic shock. Spices contain cross-reactive components like profilin and PR-10-like allergens and may direct to their identification and further characterization. The increasing use of spices in cosmetics has led to more-frequent reports of allergic skin reactions, including contact dermatitis and contact urticaria. Powdered spices may cause occupational allergic respiratory symptoms even in non-atopics. It is a difficulty in the diagnosis of food allergies against spices, that it may contain a number of pharmacologically active and/or toxic compounds, which may cause irritation and inflammation leading to intolerance reactions; these must not be mistaken as food allergies. We are offering now the possibility of a functional blood test for paprika, curry (European blend), chili, coriander, curcuma, garlic, coconut, not forgetting celery that is still present in our allergen portfolio since years.

Food allergy is now recognized as the field in which BAT testing shows the best diagnostic accuracy compared to skin testing and sIgE and CRD testing. BAT has been also recognized as a valid biomarker to follow up the development of food allergy in patients, particularly the ones undergoing Immunotherapy treatment.

With the introduction of this new food allergens and a constant pipeline of new allergens in development, we are proud to cover almost all classes of food allergens in our portfolio:

Egg and milk allergens are covering all the diagnostic needs for an improved diagnosis of allergy in children and the determination of a safe time point for the food reintroduction into diet. Peanut and the panel of nuts, seeds and beans are covering a huge need for a better assay that would discriminate from sensitized-only patients, tolerating the food, to the real allergic ones, with the goal to lower the need for oral food challenge. Fish, meat, fruit and vegetables are addressing the food allergy niches that can have a high local prevalence like fish in north European countries versus tomato and peach in the southern ones.

With the CAST[®] assays at BÜHLMANN we offer the whole platform for a standardized BAT to the laboratories: high quality reagents for basophil stimulation, a routine friendly protocol with only 4 pipetting steps, and a unique and growing list of more than 160 allergens specifically developed for BAT CAST[®] assays, covering all major requests from clinicians in the field of allergy diagnosis.

If you need any further information, please contact me by email: mr@buhlmannlabs.ch.

Michele Romano
Product Manager Allergy