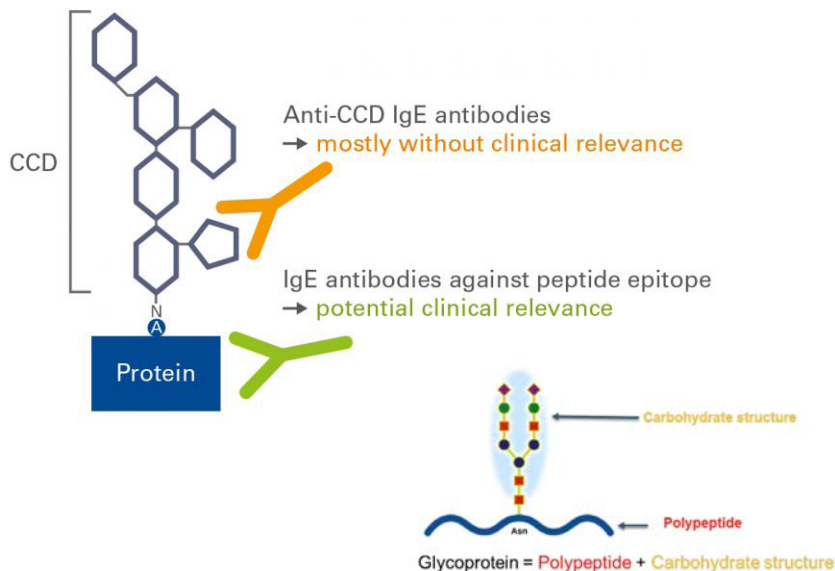


CCDs and their role in allergy diagnostics



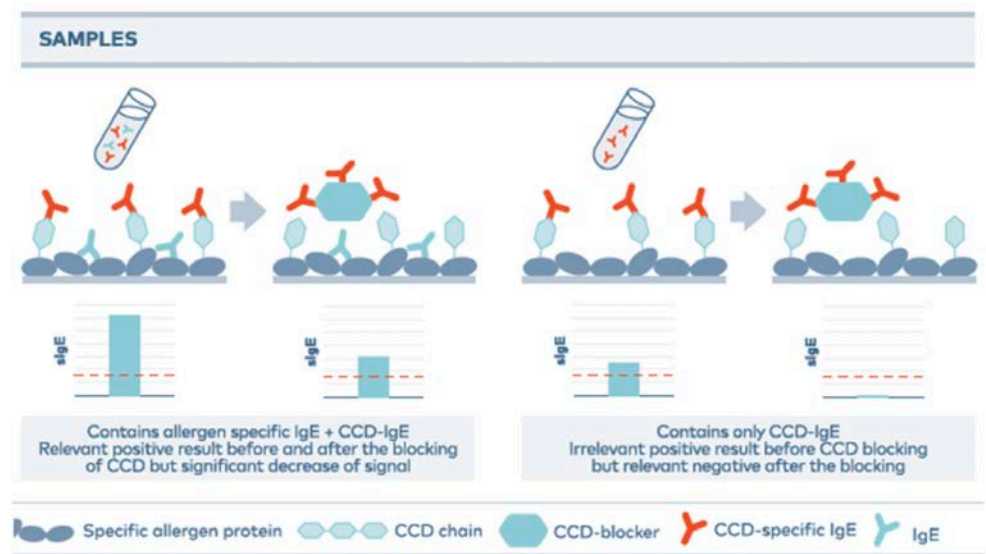
What are CCDs?

Carbohydrate Cross-Reactive Determinants (CCDs) are protein-linked carbohydrate structures responsible for a part of the cross-reactivity phenomenon.

Specific IgE (sIgE) have been detected in dogs and cats versus several proteins enriched in CCDs as Bromelain and Peroxidase. About 30% of samples have IgE vs CCDs. CCD-detection is inhibited by commercial CCD-blockers composed by CCDs from Bromelain in vitro coupled to Human Serum Albumin (HSA).

How does CCD blocking work?

Experiments in Europe show that CCDs (BRL, HRP and/or CCD blocker) used as inhibitor affects specifically those allergens which contain them however other allergens, i.e. mites, are not affected by CCD-blocking. Our CCD-blocking method is 100% specific for allergens containing CCDs.



Other Testing Considerations

Nextmune's ELISA-based serum test uses proprietary methods in order to produce a highly specific result. On top of being the only fully automated allergy testing laboratory in the US, Nextmune has also moved away from the commonly-used bovine serum assay and invested in fully synthetic reagents. We have also created buffering agents that bind to the competing IgG, IgA and IgM in serum, reducing interference in our testing. These 2 applications have resulted in a 20% reduction in false positives.

In order to maintain a leadership position in the allergy testing space, Nextmune has recently developed a new blocking agent which also reduces interference created by cross-reactive carbohydrate determinate antibodies. These are also known as CCDs or anti-CCDs. The CCDs in the serum bind to the allergen protein in a similar way to IgE therefore by blocking the CCDs, we are able to get the true IgE signal from the serum.