



What are Milk Proteins?

The Milk Proteins add-on in Semex's Elevate genomic testing platform is a bundle of four different milk protein tests; Beta-Casein (A2), Kappa-Casein (BB), Beta-Lactoglobulin, and Beta-Casein (AB). These milk proteins are controlled by genetic variants that result in different production outcomes. For details on each test please see below:

Beta-Casein (A2):

Test results format: A2A2, A1A1, A1A2.

Why test? Milk with exclusively A2A2 beta-casein milk protein has been linked with improved digestibility for people with a mild dairy sensitivity, as well as other health benefits. Pure A2A2 dairy products are selling at a premium in some markets.

Kappa-Casein (BB):

Test results format: BB, AB, BE, AA, AE.

Why test? Pure BB milk has been shown to result in 8-12% higher cheese yield for various styles of cheese, when compared to AA milk. The effect of B Kappa-Casein is additive so animals with one B gene (AB) have a moderate increase in cheese yield, while the E variant is antagonistic to cheese production.

Beta-Lactoglobulin:

Test results format: BB, AB, AA

Why test? The B variant of this whey protein is connected with higher casein and cheese yields. BB is the most favourable combination, and AB is more desirable than AA.

Beta-Casein (AB):

Test results format: BB, AB, AA

Why test? The B variant is linked to greater protein and casein yields, while the A variant is connected with higher milk yield. The optimal combination for casein and cheese yield is BB, with AB being an intermediate result.

If you have any questions regarding Milk Proteins testing please contact your local Semex Genetic Consultant or SemexElevate@semex.com.