



Detection of A1/A2 variants of beta Casein in Cow and Bull

Are we drinking the right milk?

Cow's milk protein constitutes around 30% of beta casein (β -casein). It has been classified into two genetic types as A1 and A2. **Milk containing A2 β -casein is considered to have health benefits as opposed to milk containing A1 β -casein which has been incriminated as a potential cause of coronary heart disease, diabetes and gut inflammation. The A2 variant has also been shown to have a positive association with milk yield and protein content.**

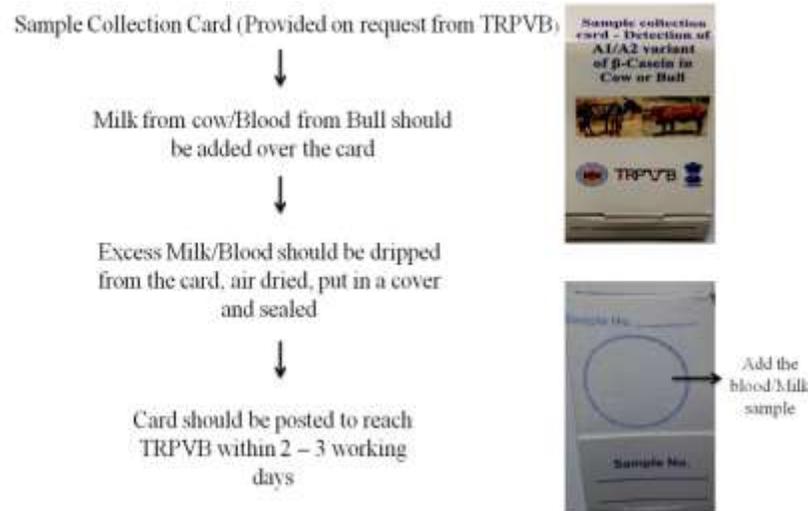
TRPVB has optimised a method to determine the A1/A2 variants of β -Casein gene from blood, dried milk spot* (DMS) and dried blood spot (DBS).

*** First of its kind to be used for A1/A2 genotyping.**

Method

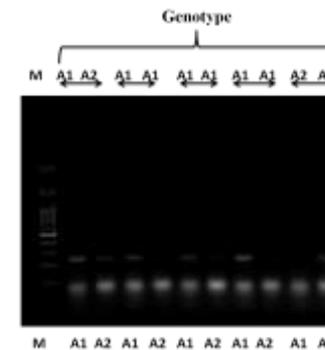
- Collect blood from bulls or cows either in EDTA vacutainer or as dried blood spots. In the case of cows, milk can also be collected as dried milk spots.
- Blood samples should be sent with an icepack and should reach TRPVB within 24 h.
- Dried blood spots or the dried milk spots can be placed in a zip lock cover, sealed and sent.

Instructions for blood spot/Milk spot collection



Results reported as

- A2** - 2 copies of A2 present. If bred to other A2/A2 animals, only A2/A2 offspring will be produced.
- A1/A2**- 1 copy of A2 present. If bred to A2/A2 animals, 50% of offspring will be A2/A2.
- A1** - No copies of A2 present.



Results would be given in 3 working days after the receipt of sample.

Potential applications

- To screen bulls and cows for production of A2 homozygous animals by the implementation of breeding programs.
- To get the premium value of A2 milk.

Cost

Cost for the genotyping of A1/A2 variants of β -casein using blood sample = Price on Request (POR)

Cost for the genotyping of A1/A2 variants of β -casein using DMS/DBS = Price on Request (POR)

Contact

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