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Data Article

Dataset of milk whey proteins of two indigenous greek goat breeds



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ARTICLE INFO

Article history:

Received 20 April 2016

Received in revised form

13 June 2016

Accepted 22 June 2016

Available online 28 June 2016

Keywords:

Foodomics

milk whey

Capra prisca breed

Skopelos Breed

LC-MS/MS

Greek goat

ABSTRACT

Due to its rarity and unique biological traits, as well as its growing financial value, milk of dairy Greek small ruminants is continuously attracting interest from both the scientific community and industry. For the construction of the present dataset, cutting-edge proteomics methodologies were employed, in order to investigate and characterize, for the first time, the milk whey proteome from the two indigenous Greek goat breeds, *Capra prisca* and Skopelos. In total 822 protein groups were identified in milk whey of the two breeds. The present data are further discussed in the research article “Milk of Greek sheep and goat breeds; characterization by means of proteomics” [1].

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DOI of original article: <http://dx.doi.org/10.1016/j.jprot.2016.04.008>

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<http://dx.doi.org/10.1016/j.dib.2016.06.038>

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Specifications Table

Subject area	<i>Foodomics, Veterinary science</i>
More specific subject area	<i>Capra prisca and Skopelos goat milk proteome</i>
Type of data	<i>Excel file, Figures</i>
How data was acquired	1D-nanoLC-MS/MS, bottom-up proteomics. Dionex Ultimate 3000 nanoHPLC system coupled to an LTQ Velos Orbitrap Elite mass spectrometer (Thermo Scientific, Rockford, IL, USA). PepMap [®] RSLC, C18, 100 Å, 3 µm-bead-packed 15 cm column and 2 µm-bead-packed 50 cm column (Thermo Scientific). Proteome Discoverer 1.4 software (Thermo Scientific), Sequest search engine searching the <i>Rumintae</i> *.fasta databases for milk of goats.
Data format	<i>Analyzed</i>
Experimental factors	<i>Milk samples from the indigenous Greek goat breeds Capra prisca and Skopelos, were systematically collected and analyzed in order to characterize the protein content of the milk of each breed.</i>
Experimental features	<i>Whole proteome analysis of milk whey</i>
Data source location	<i>Athens, Greece</i>
Data accessibility	<i>Datasets are directly provided with this article</i>

Value of the data

- The proteome dataset of milk whey from two indigenous Greek goat breeds was reported for the first time.
- The data can be used to govern future steps in optimizing characteristics and features of goat milk products.
- The comparative analysis of the data could lead to new dairy products with specific nutritional characteristics for the human health.
- The present data can be used for traceability purposes of dairy products from these goat breeds.

1. Data

In order to obtain the most representative dataset as well as to eliminate any regional effect on the milk of two pure Greek goat breeds (*Capra prisca* and Skopelos), animals from flocks across Greece were analyzed. The geographical distribution of animal flocks used for milk sample collection is shown in Fig. 1. The flowchart of the strategy followed including the end-process for protein identification approaches used is schematically shown in Fig. 2. A total of 822 proteins were identified in the analyzed goat milk samples (Table 1). In Table 1 identified proteins are shown by their accession number and their description according to Uniprot database.

2. Experimental design, materials and methods

2.1. Animals and sample collection

Approximately 20 mL of milk collected from the two indigenous goat breed (*Capra prisca* and Skopelos), aged 3 to 5 years and 49 to 63 kg in weight. Immediately after collection, milk samples were centrifuged at 4000 × g at 4 °C for 15 min, and the resulting fat layer was removed. The skim milk was transferred to sterile 1.5 mL microcentrifuge tubes and frozen at –20 °C until further analysis. All animal

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