BACKGROUND
Milk proteins are crucial for the development of all newborn mammals, and caseins constitute the major proteins in mammalian milk. β- and κ-casein are the only caseins present in human milk. The β-casein/κ-casein ratio is higher in colostrum than in transitional and mature milk and is related to a better digestibility of colostrum casein micelles by the neonate during the first days of life. κ-casein stabilizes the micellar structure of casein in mammalian milk.

κ-casein is hypermethylated at the HpaII-MspI sites in the mammary gland of virgin, 10-day pregnant and nonlactating females, but not in 10-day lactating females. κ-casein expression inversely correlates to the extent of methylation of the κ-casein gene, except in the prolactin-stimulated virgin gland. In the presence of the lactogenic hormones, insulin, aldosterone, corticosterone and PRL, epidermal growth factor inhibits the induction of κ-casein mRNA in both mouse and rat mammary glands.

REFERENCES

SOURCE
κ-casein (A-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of κ-casein of human origin.

PRODUCT
Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17975 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE
Store at 4°C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

RESEARCH USE
For research use only, not for use in diagnostic procedures.

APPLICATIONS
κ-casein (A-14) is recommended for detection of κ-casein of human, and, to a lesser extent, mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation (1-2 µg per 100-500 µg of total protein (1 ml of cell lysate), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of κ-casein: 20 kDa.

RECOMMENDED SECONDARY REAGENTS
To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA
κ-casein (A-14) sc-17975. Western blot analysis of κ-casein expression in non-transfected: sc-117752 (A) and mouse κ-casein transfected: sc-119007 (B) 293T whole cell lysates.

SOURCE
See our web site at www.scbt.com or our catalog for detailed protocols and support products.