

β-casein (FL-226): sc-30041

BACKGROUND

Milk proteins are crucial for the development of all newborn mammals and caseins constitute the major proteins in mammalian milk. β- and κ-caseins 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. Human β-casein-encoding gene (Bca) contains a highly phosphorylated site, which is responsible for the calcium-binding capacity of β-casein. A common set of transcription factors are required for the expression of β-casein. Multiple binding sites for Stat5, C/EBP β (CCAAT/enhancer-binding protein) and several half-sites for glucocorticoid receptor (GR) are identified in the distal human enhancer of the β-casein gene. β-casein gene transcription is regulated primarily by a composite response element (CoRE), which integrates signaling from the lactogenic hormones PRL, Insulin and hydrocortisone in mammary epithelial cells. NFκB functions as a negative regulator of β-casein gene expression during pregnancy by interfering with Stat5 tyrosine phosphorylation.

REFERENCES

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CHROMOSOMAL LOCATION

Genetic locus: CSN2 (human) mapping to 4q13.3.

SOURCE

β-casein (FL-226) is a rabbit polyclonal antibody raised against amino acids 1-226 representing full length β-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.

APPLICATIONS

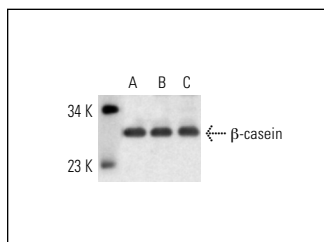
β-casein (FL-226) is recommended for detection of β-casein of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for β-casein siRNA (h): sc-40384, β-casein shRNA Plasmid (h): sc-40384-SH and β-casein shRNA (h) Lentiviral Particles: sc-40384-V.

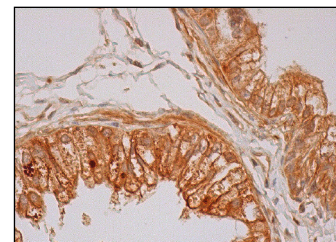
Molecular Weight of β-casein: 29 kDa.

Positive Controls: BT-20 cell lysate: sc-2223, MCF7 whole cell lysate: sc-2206 or MDA-MB-231 cell lysate: sc-2232.

DATA



β-casein (FL-226): sc-30041. Western blot analysis of β-casein expression in MCF7 (A), BT-20 (B) and MDA-MB-231 (C) whole cell lysates.



β-casein (FL-226): sc-30041. Immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis tissue showing membrane and cytoplasmic staining of glandular cells.

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.

PROTOCOLS

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

MONOS
Satisfaction
Guaranteed

Try **β-casein (F20.14): sc-53189**, our highly recommended monoclonal alternative to β-casein (FL-226).