bs-24172R **[Primary Antibody]**

Beta-casein Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

Target: Beta-casein

Immunogen: KLH conjugated synthetic peptide derived from mouse Beta-casein: 171-231/231.

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: Milk proteins are crucial for the development of all newborn mammals and caseins constitute the major proteins in mammalian milk. b- and k-caseins are the only caseins present in human milk. The b-casein/k-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 b-casein-encoding gene (Bca) contains a highly phosphorylated site, which is responsible for the calcium-binding capacity of b-casein. A common set of transcription factors are required for the expression of b-casein. Multiple binding sites for Stat5, C/EBPb (CCAAT/enchancer-binding protein) and several half-sites for glucocorticoid receptor (GR) are identified in the distal human enhancer of the b-casein gene. b-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. NFkB functions as a negative regulator of b-casein gene expression during pregnancy by interfering with Stat5 tyrosine phosphorylation

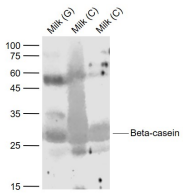
Applications: **WB** (1:500-2000)

Reactivity: Cow, Goat
(predicted: Mouse, Rat)

Predicted MW.: 24 kDa

Subcellular Location: Secreted

VALIDATION IMAGES



Sample: Lane 1: Milk (Goat) Lysate at 2 ug Lane 2: Milk (Cow) Lysate at 30 ug Lane 3: Milk (Cow) Lysate at 3 ug Primary: Anti-Beta-casein (bs-24172R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 25-29 kD Observed band size: 25-29 kD

SELECTED CITATIONS

- **[IF=10.753]** Xiaotong Ji. et al. New insights into the effect of bisphenol AF exposure on maternal mammary glands at various stages of gestation in mice. SCI TOTAL ENVIRON. 2022 Aug;:157793 IHC ;Mouse. 35934037
- **[IF=5.895]** Ji Cheng. et al. CIDEA Regulates De Novo Fatty Acid Synthesis in Bovine Mammary Epithelial Cells by

Targeting the AMPK/PPARγ Axis and Regulating SREBP1. J AGR FOOD CHEM. 2022;70(36):11324–11335 IF ;Bovine. 36040348

- **[IF=6.1]** Hao Qi. et al. Methionine and Leucine Promote mTOR Gene Transcription and Milk Synthesis in Mammary Epithelial Cells through the eEF1Bα-UBR5-ARID1A Signaling. J AGR FOOD CHEM. 2024;XXXX(XXX):XXX-XXX WB ;Bovine. 38725145