

Bovine Primary Mammary Epithelial Cells

A primary cell isolate with application in cell-based screening and life science research

PRODUCT OVERVIEW

Primary cells isolated from mammary parenchyma of cows by enzymatic digestion and fractionated by differential density gradient centrifugation before culture and cryopreservation in serum/DMSO. Cell isolates are enriched in luminal epithelial cells and are suitable for cell proliferation studies or, when cultured on permissive substrata, for the study of differentiated mammary functions.

TISSUE FEATURES

- Pregnant bovine mammary parenchyma
- Animal status: Third trimester of pregnancy.
- < 30 months of age

CELL CHARACTERISTICS

Batch number:	11-01-102016
Mycoplasma test:	Negative (by ELISA)
Virus tests:	Bovine viral diarrhoea (negative), BSE-free (veterinary examination).
Other tests:	Fungus, yeast (negative)
Passage:	P+2
Population doubling:	1-2 days
Culture medium:	Bovine Mammary Epithelial Proliferation (BNM-02)/ Mammary Epithelial Cell Differentiation (BNM-03).
Appearance:	Epithelial morphology (BNM-02)/coalesced mammospheres (BNM-03).
Surface coating:	0.2% gelatin (BNM-02)/ Reconstituted basement membrane (EHS matrix) (BNM-03).
Seeding density:	1.5x10 ⁴ /cm ² (BNM-02), 2x10 ⁵ /cm ² (BNM-03)
Recovery from frozen:	> 80%* *using specific media and attachment conditions

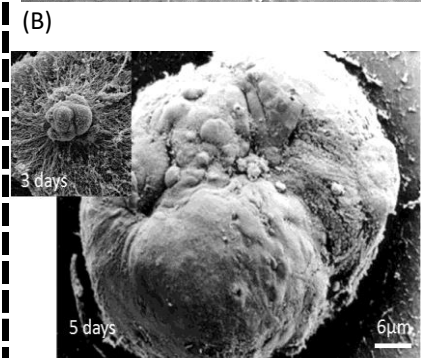
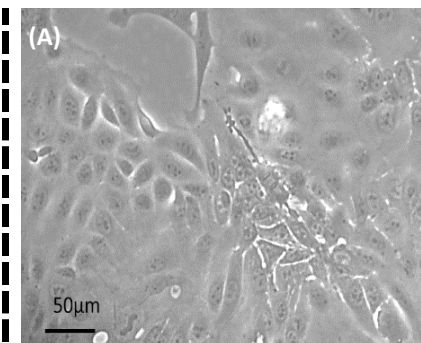


Figure 1

Cell morphology. Cells in culture were photographed using a (A) phase contrast microscope (Bar 50µm) B) Scanning electron microscope (Bar 6µm). Cells cultured in (A) Proliferation medium (BNM-02) or (B) Differentiating medium (BNM-03)

FLOW CYTOMETRY CELL ANALYSIS

Cell Marker	Target Description	Result
Cytokeratin 18	Glandular Epithelial cell marker	Positive
Cytokeratin 14	Undifferentiated epithelial cell marker	Negative
Vimentin	Mesenchymal cell marker	Negative

USES AND RESTRICTIONS

- Further expansion potential for up to 9 population doublings (when used in proliferation experiments only, not in combination with differentiation)
- For research use ONLY — not suitable for *in vitro* diagnostic use or human or animal treatment
- Potential biohazard — handle with care

Leaders in Cell Culture