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Technical Datasheet

Microscopy Slide Set for Mammalian Cell Lines

Product Code: CCK044

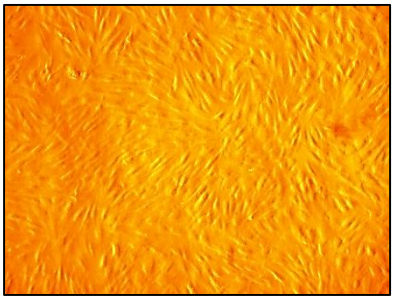
Product description:

Microscopy slide sets feature an assorted set of ready to observe slides of cultured mammalian cell lines, insect cell lines, primary cells and stem cells. They are specifically designed for educational organizations wherein the facilities to culture cells are not available. Slide sets of mammalian cells and insect cells can be visualized under normal light microscope whereas slide sets of primary cells and stem cells require phase contrast microscope for visualization. These slides sets allow easy visualization of structure and morphology of fixed cells. The product information sheet provided along with the set gives detailed information about the cells.

CCK044 is a fixed and ready to observe microscopy slide set of five mammalian cell lines – BHK-21, CHO-K1, Vero, Hep-2 and Sp2/0.

Cell Line: BHK-21

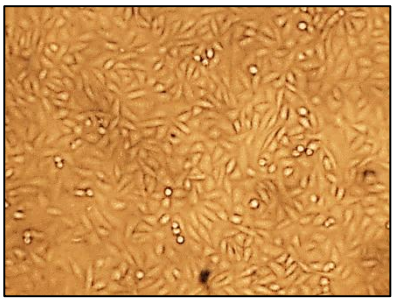
Source: 1 day old baby hamster (*Mesocricelusauratus*)
Tissue: Kidney, normal
Type of Cells: Fibroblast
Culture Characteristics: Adherent
Morphology: Fibroblast-like, multipolar or bipolar shapes and are well spread on culture surface, but on confluence they are bipolar and less well spread



BHK-21 cells (10X)

Cell Line: CHO-K1

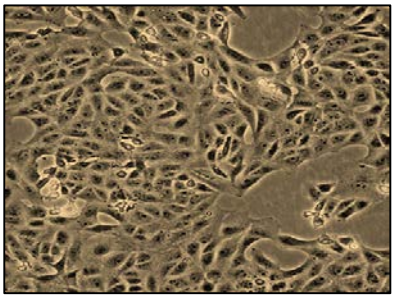
Source: Chinese Hamster (*Cricetulus griseus)*
Tissue: Female ovary
Type of Cells: Epithelial-like
Culture Characteristics: Adherent
Morphology: At high density the cells are refractile and more elliptical or epithelial-like with fewer spindle shaped cells.



CHO-K1 cells (10X)

Cell Line: Vero

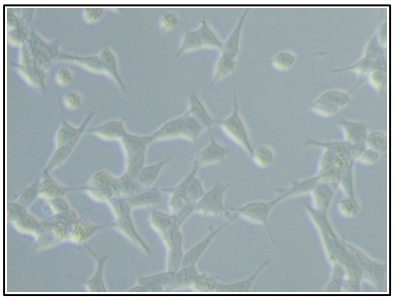
Source: African Green Monkey (*Cercopithecus aethiop*)
Tissue: Adult kidney, normal
Type of Cells: Epithelial
Culture Characteristics: Adherent
Morphology: Epithelial-like. Form sheets. After reaching confluence the cells form dense sheet with smaller cell diameters.



Vero Cells (10X)

Cell Line: Hep-2

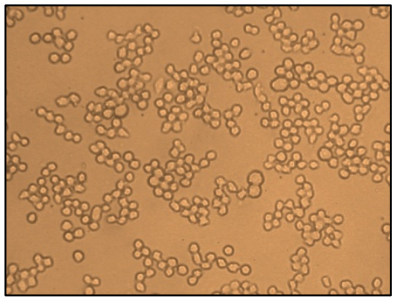
Source: Human (*Homo sapiens)*
Tissue: Laryngeal carcinoma
Type of Cells: Epithelial
Culture Characteristics: Adherent
Morphology: Epithelial-like



Hep-2 Cells (10X)

Cell Line: Sp2/0-Ag14

Source: Mouse (*Mus musculus*) B cells and myeloma cells
Tissue: Spleen
Type of Cells: Lymphoblast like
Culture Characteristics: Suspension
Morphology: Round shaped



Sp2/0-AG14 Cells (10X)

General Information:

Depending on the anchorage dependence of cultured cells, they are categorized into two types – adherent cells and suspension cells.

Adherent cells

Adherent cells are anchorage dependent cells and require solid or a semi-solid substrate for attachment and proliferation. Cells attach to the vessel surface due to action of extracellular adhesion proteins.

Non-adherent / Suspension cells

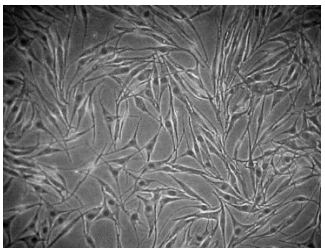
Non-adherent/ suspension cells do not require substrate for attachment. They can proliferate in floating condition.

Cell Morphology

Cell morphology refers to the shape, appearance and structure of a cells. It is visualized by phase contrast, confocal or electron microscopy. Primary cells are morphologically similar to the parent tissue whereas the established cell lines exhibit altered morphology. Morphology of the cells in culture is closely related to the function of cells within the tissue from which they are derived. Based on the morphology, mammalian cells in culture are broadly classified into three types –

- Fibroblast-like
- Epithelial-like and
- Lymphoblast-like

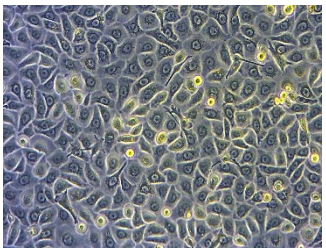
Fibroblast-like morphology



Fibroblastic cells grow attached to the substrate. They are bipolar or multipolar, wide in the center and tapered at the end

E.g. Human mesenchymal stem cells, BHK-21, human dermal fibroblasts

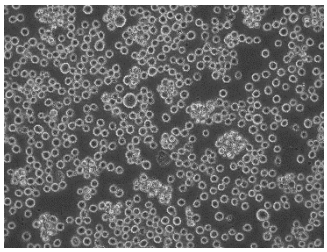
Epithelial – like morphology



Epithelial cells grow attached to the substrate in patches. They are polygonal with more regular dimensions.

E.g. CHO, Vero, Hep-2, Human epidermal keratinocytes, *Aedes albopictus* insect cell line

Lymphoblast-like morphology



Lymphoblast – like cells do not attach to the substrate. They grow in suspension and are spherical in shape.

E.g. Sp2/0 – AG14, PBMCs

Storage and Shelf Life:

Store the set at room temperature at cool and dry place; away from bright light

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