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Cell*Cover*

Ready to use solution for immediate protection of biomolecules.

For research use only.

The Product

Product description: Cell*Cover* is a non-toxic formulation for guarding DNA, RNA and protein in human and animal solid tissues, including tumors, in white blood cells and in cultured cells (adherent, suspension, spheroids).

How it works: Cell*Cover* was developed for fast "one step" stabilizing and guarding biomolecules in tissue specimens and cultured cells. Cell*Cover* stabilizes mainly by shielding molecules against enzymatic hydrolysis. Another beneficial effect of Cell*Cover* formulation is maintenance of secondary and tertiary structures of nucleic acids and proteins. Thus, tissue and cells treated with Cell*Cover* keep DNA, RNA, and protein in an *in vivo* like state, allowing modern sophisticated analyses of genetic flow, expression and function.

Guarding DNA, RNA and protein in tissue

Procedure: For optimal results use fresh tissue. Material cube edge should be less then 0,5 cm. The volume of Cell*Cover* added must be at least 5x sample volume.

Although guarding can be done at RT, best stabilization is achieved if Cell*Cover* is cooled to 4°C before guarding molecules in tissue, followed by storing specimen at 4°C o/n.

Cell*Cover* protects biomolecules:

- for at least one day at room temperature (25°C)
- up to four weeks at 4°C
- if native structure of protein is of minor importance (e. g. SDS-PAGE), samples might be frozen.

Notes:

Frozen tissue: if protein from tissue already frozen shall be guarded, incubate tissue in at least 10 volumes of precooled Cell*Cover* and thaw it fast at 0- 2°C (ice-water mixture) until tissue is completely thawed.

Large specimen to be frozen: if long term storage of larger tissues samples is required, incubation time should be increased up to 72 hours before freezing.

Capsuled organs: When guarding biomolecules in capsuled organs (e. g. kidney), capsule must be opened up (e.g. divide tissue at least once).

Guarding DNA, RNA and protein in cultured cells

Procedure: Use freshly harvested cells, centrifuge between 600g and 1200g (depending on cell type) and resuspend cells in 5 volumes cold Cell*Cover.* Store at 4°C until use. Guarded cells should not be left at RT.

Cell*Cover* protects protein:

- for at least one day at room temperature (25°C), if initial o/n guarding was at 4°C
- up to four weeks at 4°C
- if native structure of protein is of minor importance (e. g. SDS-PAGE) samples might be frozen.

Notes:

If cells contain lot of debris, wash cells twice in appropriate buffer or medium.

If guarded spheroids are to be stored, after harvesting, resuspend spheroids mechanically or by enzymatic digestion. An additional washing step might be necessary (PBS, cell-culture medium etc) to get rid of debris. Take care to remove enzymes completely or inhibit residual exogenous proteases. Guard spheroid molecules as described. Guarded samples can be stored without splitting spheroids.

Long term storage can be achieved by washing cells with 3 changes of ice cold isopropanol and subsequent storage in isopropanol at 4°C.

For special applications please read our FAQ on www.anacyte.com.

Isolating guarded biomolecules

Guarded Biomolecules can be isolated by any procedure.

Procedure: If sample is frozen, thaw on ice. If sample is in isopropanol rehydrate by washing cells with 3 changes of ice-cold Cell*Cover*.

Cells: centrifuge at 4°C, remove SN as good as possible, proceed with your protocol or with manufacturers recommendation if using a kit. Cell*Cover* is compatible with commonly used detergent for cell lysis

Tissue: remove tissue block from Cell*Cover* and place in a fresh tube, proceed with your protocol or with manufacturers recommendation, if using a kit.

Notes:

If there is need to spin down cells after thawing, use a pre-cooled centrifuge. It is strongly recommended not to underestimate this point.

If protein is to be isolated out of tissue blocks, mince tissue on ice before proceeding with protein isolation.