Material Safety Data Sheet

Product: HeLa nuclear extracts

References: CC-01-20-XX

Overview

Product name	HeLa nuclear extracts
Catalog number	CC-01-20-XX (XX correspond to product size)
Description	This HeLa nuclear extract is prepared using a modified protocol of Dignam et al., which contain a variety of DNA-binding protein, transcription factors, histone deacetylase (HDAC) and other nuclear protein. The volume of the frozen tube depends on the cell quantity used to produce nuclear extracts (detailed in the table below).

HeLa nuclear extracts

References	*Quantity*	*Product volume*
CC-01-20-005	*From 50 x 10^6 cells*	*150 ul*
CC-01-20-10	*From 1.0 x 10^9 cells*	*3 ml*
CC-01-20-25	*From 2.5 X 10^9 cells*	*7.5 ml*
CC-01-20-50	*From 5.0 X 10^9 cells*	*15 ml*

Properties

Formulation	Solution of nuclear sap dialyzed at a final concentration of ~6 mg/ml (Bradford assay) in 20 mM HEPES pH 7.9, 100 mM KCl, 0.2 mM EDTA, 20% v/v glycerol, 0.2 mM PMSF, 0.5 mM DTT.
Storage instructions	Stable at -80°C for 6 months from date of shipping. Avoid freeze/thaw cycles.
Shipping condition	Shipped on dry ice
Extract origin	HeLa cells are human epithelial cells from a cervical carcinoma biopsy. The cell line was derived from cervical cancer cells taken from Henrietta Lacks, in 1951. Horizontal gene transfer from human papillomavirus 18 (HPV18) to human cervical cells created the HeLa genome which is different from either parent genome in various ways including its number of chromosomes.
Appearance	Translucent
Odor	None
Physical properties	Not determinate
Chemical properties	Not determinate

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Precautionary measures

Hazard identification	Bio-hazard
Containment level	Are suitable for use in containment level 1 where local assessments permit
If swallowed	Not determinate
If inhaled	Note determinate
If in contact with skin or eyes	Rinse profusely with water
Toxicological Information	Not determinate
Accidental release	Clean spill area as per local procedures
Handling and storage	Follow local procedures for bio-hazard
Exposure control	Not determinate
Personal protection	Follow local rules
Ecological information	Not determinate
Disposal considerations	Sterilize material in contact with the product following local procedures
Transport information	Non-hazardous for road, sea and air freight (as per CDG UK: IMDG, IATA)
Fire-fighting measure	Non-flammable product. No fire-fighting measures required

Applications

This HeLa nuclear extracts are intended for research use only (not for diagnostic or therapeutic use). HeLa nuclear extracts are useful in a wide variety of experiments as (but not exhaustive):

- Positive control for Western Blot assays
- Gel shift assays used for protein-DNA interactions studies
- Transcription factors studies
- HDAC assays
- Cell division cycle and apoptosis studies
- Separation by SDS-PAGE
- In vitro splicing
- Spliceosome and other proteome studies (DNA ends, snRNP's, DNA PKcs, …)

Production

Method	HeLa cytoplasm is prepared from cells grown in a sono-perfused fedbatch (cytostat) in 15L bioreactor under GLP conditions. Cells are produced at constant cell density with a viability over 95%. Cells are harvested in exponential phase.
Quality Control	Quality Control Cultures are screened for the presence of bacteria, yeast, fungi and mycoplasma (DNA amplification). NBCS used in the culture medium is certified from New Zealand origin