Universal Mouse Reference RNA

Catalog #740100

Storage Store the Universal Mouse Reference RNA at –80°C. Store the RNase-free water at –20°C.

INTRODUCTION

Stratagene's Universal Mouse Reference RNA (UMRR) is composed of total RNA from 11 mouse cell lines. The reference RNA is designed to be used as a reference for microarray gene-profiling experiments. Since RNA species differ in abundance between cell lines, an ideal reference sample should represent these different RNAs. Equal quantities of DNase-treated total RNA from each cell line were pooled to make the Universal Mouse Reference RNA. This Universal Reference RNA is suitable for mouse microarray experiments.

MATERIALS PROVIDED

Material Provided	Quantity
Reference RNA	2 tubes x 200 µg each
RNase-free water	1.5 ml

Cell Line Derivations	
embryo	T-lymphocyte (thymus)
embryo, fibroblast	mammary gland
kidney	muscle myoblast
liver, hepatocyte	skin
lung, alveolar macrophage	testis
B-lymphocyte	

ADDITIONAL MATERIALS REQUIRED

RNase-free 70% Ethanol

PROTOCOL

The UMRR is provided in a solution of 70% ethanol and 0.1 M sodium acetate. Prepare the UMRR for use as follows:

1. Centrifuge the tube at 12,000 × g for 15 minutes at 4°C.
2. Carefully remove the supernatant.
3. Wash the pellet in 70% ethanol.
4. Centrifuge the tube at 12,000 × g for 15 minutes at 4°C.
5. Carefully remove the supernatant and air-dry the pellet at room temperature for 30 minutes to remove retained ethanol.
6. Resuspend the pellet in RNase-free water to the desired concentration.

Proceed with the preparation of labeled cDNA and interrogate the arrays according to the manufacturer's instructions.

QUALITY CONTROL TESTING

The quality of the Universal Mouse Reference RNA is assessed by observing distinct 28S and 18S ribosomal bands on a 1× MOPS agarose gel under denaturing conditions. The purity of the RNA is assessed by spectrophotometry (A260/A280 ≥1.8). The RNA is then shown to be free of contaminating RNases by incubation in a suitable buffer at 37°C followed by gel analysis against known RNAse-free controls. The RNA is further tested functionally by synthesizing labeled cDNA, which is then hybridized to a microarray to examine gene representation and coverage.

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