Human Cot-1 DNA Quick Manual

Version：202112v7　date：20250506

Product Name	Description	Item No.	Capacity	Storage
Human Cot-1 DNA	Genomic cell DNA repeat sequence Clarify the solution 1 mg/mL 10 mM Tris-HCl 1 mM EDTA　pH 7.0~8.0 Chemical Safety Technical Instructions (in accordance with GB/T 16483, GB/T 17519) Non hazardous substances or mixtures Appearance and Characteristics: Liquid Color: colorless Odor: None Flammable (liquid): non combustible, non flammable Solubility: Water soluble Contact control and personal protection: Generally, personal respiratory protective equipment is not required. It is recommended to wear safety goggles, laboratory protective clothing, and protective gloves during operation Stability and reactivity: No dangerous reactions observed under normal usage conditions Conditions to avoid: Exposure to high temperatures and sunlight Prohibited compound: Strong oxidizing agent Dangerous decomposition products: No dangerous decomposition products Toxicological information: not found based on existing information Transport information: GB 6944/12268 is not classified as dangerous goods management Waste chemicals: can be treated as wastewater when complying with local regulations Polluted packaging materials: Empty containers should be sent to licensed waste disposal sites for recycling or disposal, and empty containers should not be reused.	P90002COT-60	☐　12 rxns */ 60μL	Dry ice transportation -Store at 20 ℃ Valid for 2 years
		P90002COT-500	☐　96 rxns */ 500μL	

*Here, the number of rxns reactions corresponds to the amount used in the hybridization capture experiment, and the volume of Human Cot-1 DNA for other purposes is added according to actual needs.

Product Description

Human Cot-1 DNA: The COT portion of human genomic DNA is mainly composed of rapidly annealed repetitive sequences. Scattered repeat sequences (IRS) such as SINE (Short Scattered Repeat Sequence, such as Alu Sequence) and LINE (Long Scattered Repeat Sequence, such as L1 Sequence) are widely distributed throughout the genome. These human placental cell DNA rich in repetitive sequences were prepared by cutting, denaturation, annealing, and purification to obtain Human Cot-1 DNA.

In hybridization capture, the competitive DNA of Human Cot-1 DNA requires denaturation of the probe in the presence of an excess of unlabeled Human Cot-1 DNA in order for the probe to specifically hybridize with the chromosomal target site. In the subsequent pre annealing step, repetitive sequences on the genome quickly hybridize with those in Human Cot-1 DNA, while most specific probe sequences remain single stranded and can therefore hybridize with the target gene DNA.

In microarray analysis, filter and fluorescence in situ hybridization experiments, Human Cot-1 DNA is used to block non-specific hybridization; It can also be used to inhibit repetitive DNA sequences for direct localization of human DNA or for cloning genomes into somatic hybrid groups, and for chromosome localization through Southern Blotting.

Performance Verification

In agarose gel/PAGE electrophoresis, the length distribution range of Human Cot-1 DNA fragments is 50~300bp.

Quality System

ISO 9001:2015 Quality Management System - Requirements YY/T 0287-2017 idt ISO13485：2016

Recommended usage for single hybridization capture reaction: (Other uses can be added according to system requirements)

Composition	Usage	Note
DNA library For NGS	**500 ng**	Single library
Human Cot-1 DNA	**5 μL**	Single hybridization reaction with 500ng library DNA, recommended to use 5 μ L Single hybridization reaction with 2 μ g library DNA, recommended to use 5 μ L Single hybridization reaction with 4 μ g library DNA, recommended to use 10 μ L
Blocker （For ILMN / MGI / ION）	**2 μL**	Not included in this reagent kit