

Recombinant Human Cytokeratin 14 (CK14)

Certificate of Analysis and Data Sheet

➤ Source: E.Coli	➤ Catalog No. PRO-348
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➤ **Background:**

Keratins are a class of fibrous proteins or scleroproteins important both as structural proteins and as keys to the study of protein conformation. The family represents the principal constituent of epidermis, hair, nails, horny tissues, and the organic matrix of tooth enamel. Two major conformational groups have been characterized, alpha-keratin, whose peptide backbone forms an alpha-helix, and beta-keratin, whose backbone forms a zigzag or pleated sheet structure.

Cytokeratin 14, a type I intermediate filament, is one of the two cytokeratins that distinguish stratifying epithelial cells types from simple epithelial cell types. Thus, cytokeratin 14 is expressed by stratifying/keratinocyte cell types but not by simple epithelial cells.

➤ **Description :**

Recombinant Human Recombinant Human Cytokeratin 14 produced in E.Coli is a single, non-glycosylated polypeptide chain having a molecular mass of 51,530 Dalton. Recombinant Human Cytokeratin 14 is purified by proprietary chromatographic techniques.

➤ **Physical Appearance:**

Sterile Filtered White lyophilized (freeze-dried) powder.

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Cytokeratin 14, at a concentration of 1mg/ml, was lyophilized from a sterile solution containing 30mM Tris-HCL pH-8, 9.5M urea, 2mM EDTA and 10mM methylammonium chloride.

➤ **Solubility:**

It is recommended to reconstitute the lyophilized CK-14 in sterile 18MΩ-cm H₂O not less than 100µg/ml, which can then be further diluted to other aqueous solutions.

➤ **Stability:**

Recombinant CK14 although stable at 4 C for 30 days, should be stored desiccated below -20 C for periods greater than 30 days.

Please avoid freeze-thaw cycles.

➤ **Purity:**

Greater than 95.0% as determined by:

(a) Analysis by RP-HPLC.

(b) Anion-exchange FPLC.

(c) Analysis by reducing and non-reducing SDS-PAGE Silver Stained gel.

➤ **Dimers and aggregates:**

Less than 1% as determined by silver-stained SDS-PAGE gel analysis.

➤ **Endotoxin:**

Less than 0.1 ng/μg (IEU/μg) of Keratin 14.

➤ **Protein content:**

Protein quantitation was carried out by two independent methods:

1. UV spectroscopy at 280 nm.

2. Analysis by RP-HPLC, using a calibrated solution of keratin 14 as a Reference Standard.

➤ **Usage:**

This material is offered for research, laboratory or further evaluation purposes.