

Recombinant Human Keratin 18

Cat. No. KRT18-464H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human Cytokeratin 18 produced in <i>E. Coli</i> is a single, non-glycosylated polypeptide chain and has a molecular mass of 53,532 Dalton. The rHuCK-18 is purified by proprietary chromatographic techniques.
Species	Human
Source	E.coli
Description	Keratin 18 is a type I cytokeratin. It is, together with its filament partner keratin 8, perhaps the most commonly found products of the intermediate filament gene family. They are expressed in single layer epithelial tissues of the body. Mutations in this gene have been linked to cryptogenic cirrhosis. Two transcript variants encoding the same protein have been found for this gene.
Physical Appearance	Sterile Filtered White lyophilized (freeze-dried) powder.
Formulation	The protein (1mg/ml) was lyophilized after from a sterile solution containing 30mM Tris-HCL pH-8, 9.5M urea, 2mM EDTA and 10mM methylammonium chloride.
Purity	Greater than 95.0% as determined by: (a) Analysis by RP-HPLC. (b) Analysis by SDS-PAGE.
Solubility	It is recommended to reconstitute the lyophilized rHuCK-18 in sterile 18MΩ-cm H ₂ O not less than 100g/ml, which can then be further diluted to other aqueous solutions.

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Dimers And Aggregates	Less than 1% as determined by silver stained SDS-PAGE gel analysis.
Endotoxin	Less than 0.1 ng/g (IEU/g) of rHuCK-18.
Protein Content	Protein quantitation was carried out by two independent methods: 1. UV spectroscopy at 280 nm. 2. Analysis by RP-HPLC, using a standard solution of CK-18 as a Reference Standard.
Reconstitution To Filaments	Performed by mixing equimolar amounts of cytokeratins of type I and type II at concentrations of approx. 0.5 mg/ml, both dissolved in 9.5 M urea buffer (see above). Protofilaments and filament complexes are obtained by dialyzing the resulting polypeptide solution stepwise to a concentration of 4 M urea and then to low salt condition (50 mM NaCl, 2 mM dithiothreitol, 10 mM Tris-HCl, pH 7.4). For immunization purposes, the solution can be further dialyzed against PBS (phosphate buffered saline, e.g. Dulbecco's PBS).
Stability	Lyophilized rHuCK-18 although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution rHuCK-18 should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

GENE INFORMATION

Gene Name	KRT18 keratin 18 [Homo sapiens]
Synonyms	KRT18; keratin 18; K18; CYK18;cytokeratin 18; cell proliferation-inducing protein 46;Keratin, type I cytoskeletal 18; Cytokeratin-18; CK-18; Keratin-18; Cell proliferation-inducing gene 46 protein; PIG46; cytokeratin 18

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Gene ID	3875
mRNA Refseq	NM_000224
Protein Refseq	NP_000215
MIM	148070
UniProt ID	P05783
Chromosome Location	12q13
Pathway	Pathogenic Escherichia coli infection - EHEC
Function	protein binding; structural molecule activity

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