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Certificate of Analysis and Data Sheet Recombinant Human Collagen-3

Catalog No.
228-10266

Source:
Pichia pastoris.

Synonyms

Collagen alpha-1(III) chain, COL3A1, EDS4A, FLJ34534

Introduction

Collagen, a major component of the extracellular matrix, is a fibrous protein that provides tensile strength to tissues giving them structural integrity. Collagen and its derivative, gelatin, have been widely used in medical, pharmaceutical and consumer products for more than 100 years. The supply of these materials, created from animal remains, is both abundant and inexpensive. However, most formulations are not highly purified and have the potential to cause an inflammatory reaction in some product users. In addition, concerns have been raised over the last several years about the potential for contamination of bovine products with the agent that causes mad cow disease and its human variant, Creutzfeldt-Jakob Disease. Animal collagens are subject to extensive modifications that continue over the life of the molecule in the extracellular space. These differences influence both the extractability of collagens from tissue and the biophysical characteristics of these collagens. As a result, collagens isolated from tissues exhibit significant lot-to-lot variability and, as bulk materials, are often analytically intractable. Products that contain animal-derived collagen can induce potentially harmful inflammatory or immune responses in humans and pose risk of contamination with viruses or prions, potentially life-threatening pathogens. Recombinant collagens are essentially identical to the native collagen protein thereby reducing the risk of inflammation, immune response, and disease as compared to animal-sourced collagen.

Description

DNA sequences encoding the human proalpha1 (III) and both alpha and beta subunits of prolyl hydroxylase were co-expressed in the yeast *Pichia pastoris*. Procollagen III was converted into mature collagen by a controlled proteinase digestion.

Physical Appearance

Sterile Filtered colorless solution.

Purity

Greater than 95.0% as determined by SDS-PAGE.

Stability

Collagen-III should be stored at 2-8°C.

**The products are furnished for LABORATORY RESEARCH USE ONLY.
Not for diagnostic or therapeutic use.**