

DESCRIPTION

Source Chinese Hamster Ovary cell line, CHO-derived human Keratocan protein
Arg21-Ile352, with a C-terminal 6-His tag
Accession # O60938.1

N-terminal Sequence Analysis Arg21

Predicted Molecular Mass 40 kDa

SPECIFICATIONS

SDS-PAGE 44-62 kDa, under reducing conditions

Activity Measured by its binding ability in a functional ELISA.
When Recombinant Human Keratocan His-tag is immobilized at 1.00 µg/mL (100 µL/well), Recombinant Human BLMH/Bleomycin Hydrolase (Catalog # 6200-CY) binds with an ED₅₀ of 1.20-12.0 µg/mL.

Endotoxin Level <0.10 EU per 1 µg of the protein by the LAL method.

Purity >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.

Formulation Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 1 mg/mL in PBS.

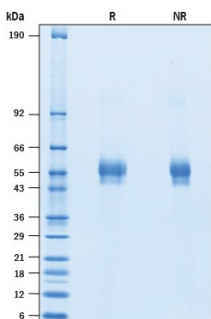
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Use a manual defrost freezer and avoid repeated freeze-thaw cycles.

- 12 months from date of receipt, -20 to -70 °C as supplied.
- 1 month, 2 to 8 °C under sterile conditions after reconstitution.
- 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

SDS-PAGE



Recombinant Human Keratocan His-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Human Keratocan His-tag (Catalog # 10838-KE) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 44-62 kDa.

BACKGROUND

Keratocan is a keratan sulfate-containing proteoglycan that is highly expressed in human cornea (1, 2). It is an extracellular matrix protein that belongs to the class II small leucine-rich proteoglycan family (1). This class of protein contains 10-12 leucine-rich repeat motifs flanked by conserved cysteine residues in N- and C-terminal domains of the core proteins (1, 3). Human keratocan is expressed as a 352 amino acid (aa) protein that includes a 20 aa signal peptide and the 332 aa keratocan protein containing ten LRR motifs (2). Human keratocan shares 87% and 88% aa identity with mouse and rat keratocan, respectively. Keratocan is expressed in the cornea and tendon where it is likely to play a role in collagen fibrillogenesis and in maintaining corneal clarity (4, 5). Keratocan is also expressed in the bone and can modulate osteogenic differentiation (6).

References:

1. Kao, W. *et al.* (2003) *Ocul Surf.* **1**:5.
2. Pellegata, N.S. *et al.* (2000) *Nat. Genet.* **25**:91.
3. Ameye, L. *et al.* (2002) *Glycobiology* **12**:107R.
4. Liu, C. *et al.* (2003) *J. Biol. Chem.* **278**:21672.
5. Rees, S.G. *et al.* (2009) *Osteoarthritis Cartilage* **17**:276.
6. Igwe, J.C. *et al.* (2011) *Connect. Tissue Res.* **52**:401.