

DESCRIPTION

Source Chinese Hamster Ovary cell line, CHO-derived human Decorin protein
Asp31-Lys359
Accession # P07585.1

N-terminal Sequence Analysis Asp31

Predicted Molecular Mass 36 kDa

SPECIFICATIONS

SDS-PAGE 38-47 kDa, under reducing conditions.

Activity Measured by its binding ability in a functional ELISA.
Recombinant Human Decorin binds to collagen with an ED₅₀ of <100 ng/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 with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution Reconstitute at 100 µg/mL in water.

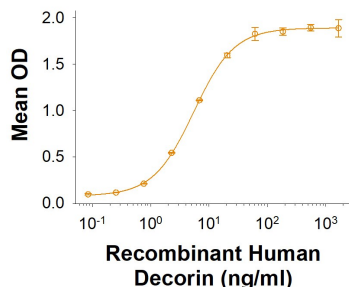
Shipping The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.

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.

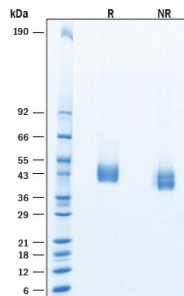
DATA

Binding Activity



Recombinant Human Decorin Protein Binding Activity. Measured by its binding ability in a functional ELISA. Recombinant Human Decorin Protein (Catalog # 11808-DE) binds to collagen with an ED₅₀ of <100 ng/mL.

SDS-Page



Recombinant Human Decorin Protein SDS-PAGE. 2 µg/lane of Recombinant Human Decorin Protein (Catalog # 11808-DE) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands 38-47 kDa, under reducing conditions.

BACKGROUND

Decorin, also known as PG40 and PGS2, is a secreted chondroitin/dermatan sulfate proteoglycan in the family of small leucine-rich proteoglycans (SLRPs). SLRP family members are characterized by N-terminal and C-terminal cysteine-rich regions which flank the central region containing 10 - 12 tandem leucine-rich repeats (LRR) (1). The human Decorin cDNA encodes a 359 amino acid (aa) precursor that includes a 16 aa signal sequence and a 14 aa propeptide (2). Mature human Decorin contains twelve tandem LRR and shares 80% and 78% aa sequence identity with mouse and rat Decorin, respectively. Alternate splicing of human Decorin generates five isoforms with variable length deletions. Decorin is an N-glycosylated protein that also carries a variably-sized hybrid chondroitin/dermatan sulfate chain at Ser34 (3, 4). Naturally occurring Decorin proteoglycan has a molecular mass of approximately 100 kDa, and the deglycosylated Decorin core protein has a mass of approximately 40 kDa (5). Decorin regulates assembly of the extracellular collagen matrix and the bioactivity of the matrix associated growth factors FGF-2, GDF-8/Myostatin, TGF- β , and WISP-1 (4, 6 - 9). It also binds and activates EGF R, ErbB4, and IGF-I R (10 - 12). *In vivo*, Decorin promotes myoblast differentiation, supports angiogenesis, and inhibits tumor progression (13 - 16). Decorin is cleared from the extracellular space by LRP-mediated endocytosis (17).

References:

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