

Active Recombinant Human PRG4

Cat. No. PRG4-1573H Lot. No. (See product label)

SPECIFICATION

Product Overview	Recombinant Human PRG4 was expressed in CHO cells.
Species	Human
Source	CHO
Description	The protein encoded by this gene is a large proteoglycan specifically synthesized by chondrocytes located at the surface of articular cartilage, and also by some synovial lining cells. This protein contains both chondroitin sulfate and keratan sulfate glycosaminoglycans. It functions as a boundary lubricant at the cartilage surface and contributes to the elastic absorption and energy dissipation of synovial fluid. Mutations in this gene result in camptodactyly-arthropathy-coxa vara-pericarditis syndrome. Multiple transcript variants encoding different isoforms have been found for this gene.
Form	The sterile filtered solution was lyophilized from 1 x PBS, pH 7.0
Bio-activity	Synoviocyte binding inhibition on Lubricin coated plates at 100 µg/ml, relative to uncoated plates, was 37% for recombinant Lubricin and 41% for Lubricin from synovial fluid. Lubricin was tested for lubricating ability in a cartilage upon cartilage friction bearing using whole human Synoviocyte Fluids as a positive control. The μstatic was 0.076 ± 0.020 SD for Human Lubricin, and 0.093 ± 0.016 SD for recombinant Lubricin. The μstatic for phosphate buffered saline was 0.275 ± 0.037.

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Molecular Mass	The protein has a molecular weight of 206 kDa measured by sedimentation analysis, yet due the post-translational modifications the apparent molecular weight on SDS-PAGE is 280-345 kDa.
Endotoxin	Endotoxin level is less than 0.1 ng per µg (1EU/µg).
Purity	Greater than 95% by SDS-PAGE.
Storage	The lyophilized protein is stable for a few weeks at room temperature, but best stored at -80 0C. Reconstituted Human Lubricin should be stored in working aliquots at -20 0C.
Reconstitution	We recommend a quick spin followed by reconstitution in 1x PBS pH 7.2-7.4 to a concentration of 0.25 mg/ml. This solution can then be diluted into other aqueous buffers and stored at 4 0C for 1 week or stored at -20 0C for future use.

GENE INFORMATION

Gene Name	PRG4 proteoglycan 4 [Homo sapiens (human)]
Official Symbol	PRG4
Synonyms	PRG4; MSF; SZP; CACP; HAPO; JCAP; bG174L6.2; proteoglycan 4; lubricin; superficial zone proteoglycan; megakaryocyte stimulating factor; megakaryocyte-stimulating factor; articular superficial zone protein; bG174L6.2 (MSF: megakaryocyte stimulating factor)
Gene ID	10216
mRNA Refseq	NM_005807

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Protein Refseq	NP_005798
MIM	604283
UniProt ID	Q92954
Chromosome Location	1q25-q31
Function	polysaccharide binding; scavenger receptor activity

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