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Datasheet for ABIN2859228

**Biglycan ELISA Kit****1** Image

## Overview

Quantity:	96 tests
Target:	Biglycan (BGN)
Binding Specificity:	AA 38-368
Reactivity:	Human
Method Type:	Sandwich ELISA
Detection Range:	156-10.000 pg/mL
Minimum Detection Limit:	156 pg/mL
Application:	ELISA

## Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Human Biglycan
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA), Tissue Homogenate
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: D38-K368
Specificity:	Expression system for standard: NSO Immunogen sequence: D38-K368
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

## Product Details

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Sensitivity: <10pg/mL

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Material not included: Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g NaCl

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## Target Details

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Target: Biglycan (BGN)

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Alternative Name: BGN ([BGN Products](#))

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Background: Protein Function: May be involved in collagen fiber assembly. .  
Background: Biglycan (BGN) is a small leucine-rich repeat proteoglycan (SLRP) which is found in a variety of extracellular matrix tissues, including bone, cartilage and tendon. It is an important structural component of articular cartilage and participates in the assembly of the chondrocyte extracellular matrix through formation of protein interactions with type VI collagen and large proteoglycan aggregates. In humans, Biglycan is encoded by the BGN gene. It is mapped to Xq28. Biglycan is believed to play a role in the mineralisation of bone, and its core protein binds to the growth factors BMP-4 and influences its bioactivity. It has been reported that the presence of biglycan is necessary for BMP-4 to exert its effects on osteoblasts. There is also evidence that biglycan can bind to TGF-beta 1. In addition, Biglycan plays an important role in cell signaling.  
Synonyms: Biglycan, Bone/cartilage proteoglycan I, PG-S1, BGN, SLRR1A,  
Full Gene Name: Biglycan  
Cellular Localisation: Secreted, extracellular space, extracellular matrix.

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Gene ID: 633

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UniProt: [P21810](#)

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Pathways: [Glycosaminoglycan Metabolic Process](#)

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## Application Details

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Application Notes: Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.

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Comment: Sequence similarities: Belongs to the small leucine-rich proteoglycan (SLRP) family. SLRP class I subfamily.

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## Application Details

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Tissue Specificity: Found in several connective tissues, especially in articular cartilages.

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Plate: Pre-coated

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Protocol: human Biglycan ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from mouse specific for Biglycan has been precoated onto 96-well plates. Standards(NSO, D38-K368) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for Biglycan is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the human Biglycan amount of sample captured in plate.

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Assay Procedure: Aliquot 0.1 mL per well of the 10,000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 312pg/mL, 156pg/mL human Biglycan standard solutions into the precoated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of human cell culture supernates, serum, plasma(heparin, EDTA) or tissue homogenates to each empty well. See "Sample Dilution Guideline" above for details. It is recommended that each human Biglycan standard solution and each sample be measured in duplicate.

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Assay Precision:

- Sample 1: n=16, Mean(ng/ml): 1.62, Standard deviation: 0.06, CV(%): 3.7
- Sample 2: n=16, Mean(ng/ml): 2.91, Standard deviation: 0.157, CV(%): 5.4
- Sample 3: n=16, Mean(ng/ml): 5.38, Standard deviation: 0.264, CV(%): 4.9,
- Sample 1: n=24, Mean(ng/ml): 1.52, Standard deviation: 0.062, CV(%): 4.1
- Sample 2: n=24, Mean(ng/ml): 3.07, Standard deviation: 0.209, CV(%): 6.8
- Sample 3: n=24, Mean(ng/ml): 6.34, Standard deviation: 0.33, CV(%): 5.2

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Restrictions: For Research Use only

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## Handling

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Handling Advice: Avoid multiple freeze-thaw cycles.

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Storage: -20 °C, 4 °C

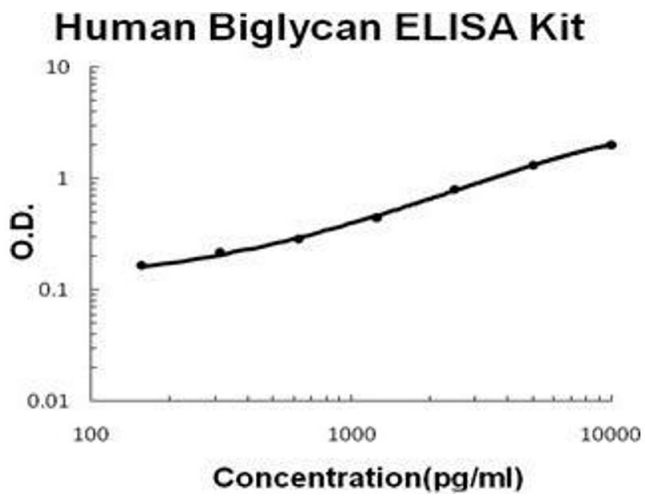
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Storage Comment: Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles

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Expiry Date: 12 months

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#### ELISA

**Image 1.** Human Biglycan PicoKine ELISA Kit standard curve