



Human proteoglycan 4(PRG4) ELISA Kit

Product Code	CSB-E14124h
Abbreviation	PRG4
Uniprot No.	Q92954
Product Type	ELISA Kit
Immunogen Species	Homo sapiens (Human)
Sample Types	serum, plasma and tissue homogenates.
Detection Range	0.78 ng/ml-50 ng/ml.
Sensitivity	0.195 ng/ml
Assay Time	1-5h
Sample Volume	50-100ul
Detection Wavelength	450 nm
Lead Time	3-5 working days after you place the order, and it takes another 3-5 days for delivery via DHL or FedEx.
Research Area	Others
Quality Control	A microplate reader capable of measuring absorbance at 450 nm, with the correction wavelength set at 540 nm or 570 nm. An incubator can provide stable incubation conditions up to 37°C±5°C. Centrifuge Vortex Squirt bottle, manifold dispenser, or automated microplate washer Absorbent paper for blotting the microtiter plate 50-300ul multi-channel micropipette Pipette tips Single-channel micropipette with different ranges 100ml and 500ml graduated cylinders Deionized or distilled water Timer Test tubes for dilution
Gene Names	PRG4
Tag Info	quantitative
Protein Description	Sandwich
Component	A micro ELISA plate --- The 96-well plate has been pre-coated with an anti-human PRG4 antibody. This dismountable microplate can be divided into 12 x 8 strip plates. Two vials lyophilized standard ---Dilute a bottle of the standard at dilution series, read the OD values, and then draw a standard curve. One vial Biotin-labeled PRG4 antibody (100 x concentrate) (120 µl/bottle) ---Act as the detection antibody.



One vial HRP-avidin (100 x concentrate) (120 µl/bottle) ---Bind to the detection antibody and react with the TMB substrate to make the solution chromogenic.

One vial Biotin-antibodyDiluent (15 ml/bottle) ---Dilute the Biotin-antibody.

One vial HRP-avidin Diluent (15 ml/bottle) ---Dilute the HRP-avidin solution.

One vial Sample Diluent (50 ml/bottle)---Dilute the sample to an appropriate concentration.

One vial Wash Buffer (25 x concentrate) (20 ml/bottle) ---Wash away unbound or free substances.

One vial TMB Substrate (10 ml/bottle) ---Act as the chromogenic agent. TMB interacts with HRP, eliciting the solution turns blue.

One vial Stop Solution (10 ml/bottle) ---Stop the color reaction. The solution color immediately turns from blue to yellow.

Four Adhesive Strips (For 96 wells) --- Cover the microplate when incubation.

An instruction manual

Description

The Human proteoglycan 4 (PRG4) ELISA kit is suitable for quantitative measurement of PRG4 levels in the serum, plasma, or tissue homogenates. It is not intended for diagnostic use and only used for scientific research in humans. The kit has undergone rigorous quality control in multiple parameters, including sensitivity, specificity, precision, linearity, recovery, and inter-batch difference. Refer to the product instructions for more details.

This assay employs the quantitative sandwich enzyme immunoassay technique, in which PRG4 in the samples or standards are sandwiched between pre-coated PRG4 antibody and Biotin-conjugated PRG4 antibody. HRP-avidin is then added to the wells. Following a wash to remove any unbound reagent, the TMB substrate solution is added to the wells and color develops in proportion to the amount of PRG4 bound in the initial step. The color development is stopped upon adding the stop solution, and the intensity of the color is measured at 450 nm via a microplate reader. The levels of PRG4 in the samples can be determined by referring to the O.D. (optical density) of the samples to the standard curve.

PRG4, also called lubricin, is a mucinous glycoprotein secreted by synovial fibroblasts and superficial zone chondrocytes. It is a major component of synovial fluid (SF) and therefore plays an important role in joint lubrication and synovial homeostasis. PRG4, which is naturally present at the human cornea-eyelid interface, has been proved to be involved in the reduction of the friction between the cornea and the conjunctiva. Marwa Qadri etc. revealed that PRG4 is an endogenous antifibrotic modulator in the joint and its effect on myofibroblast formation is partially mediated by CD44, but CD44 is not required to demonstrate an antifibrotic effect in vivo. Loss of PRG4 function has been linked to camptodactyly-arthropathy-coxa vara-pericarditis syndrome (CACP), an arthritis-like autosomal recessive disorder.

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