

# Osteocalcin (OC) ELISA Kit

- Citations>81
- Cumulative IF>330

Osteocalcin (OC), also known as R-hydroxy glutamic acid protein (GLa protein), is a protein consisting of 49 amino acids. It belongs to non-collagen acidic glycoprotein, which is a vitamin K-dependent calcium binding protein. Osteocalcin levels are used to monitor bone development and bone metabolism, and their content is negatively correlated with age, as children being the highest and decreasing with age.

Osteocalcin is mainly synthesized of osteoblasts and odontoblasts, and some are synthesized by proliferating chondrocytes, which plays an important role in regulating bone calcium metabolism. It is a new biochemical marker for studying bone metabolism, which is of great value in the diagnosis of osteoporosis syndrome, abnormal calcium metabolism and other diseases.

## 1.Cloud-Clone OC target related products

Target	Product No.	Product Name	Species
OC	SEA471Hu	Human ELISA Kit for Osteocalcin (OC)	Human
	SEA471Mu	Mouse ELISA Kit for Osteocalcin (OC)	Mouse
	SEA471Ra	Rat ELISA Kit for Osteocalcin (OC)	Rat
	SEA471Rb	Rabbit ELISA Kit for Osteocalcin (OC)	Rabbit
	SEA471Bo	Bovine ELISA Kit for Osteocalcin (OC)	Bovine
	SEA471Po	Porcine ELISA Kit for Osteocalcin (OC)	Porcine
	SEA471Ga	Gallus ELISA Kit for Osteocalcin (OC)	Gallus
	SEA471Ca	Canine ELISA Kit for Osteocalcin (OC)	Canine

## 2.Excellent Citations of OC target related products (Excerpt)

Product No.	Species	Journal	IF	Pubmed ID	Institute
SEA471Mu	Mouse	Bone Research	12.354	30455992	State Key Laboratory of Oral Diseases, West China Hospital of Stomatology, Sichuan University
SEA471Hu	Human	Biomaterials	8.387	22333987	Key Laboratory of Bio-Rheology Science and Technology, Ministry of Education, College of Bioengineering, Chongqing University
SEA471Hu	Human	ACS Applied Materials & Interfaces	8.097	30629405	National Engineering Research Center for Biomaterials, Sichuan University
SEA471Mu	Mouse	Nanoscale	7.233	30255905	Department of Orthopaedics, NUS Yong Loo Lin School of Medicine
SEA471Hu	Human	Nanoscale	7.233	30255905	Department of Orthopaedics, NUS Yong Loo Lin School of Medicine
SEA471Ra	Rat	Carbon	7.082	10.1016/j.carbon.2018.10.081	Ningbo University School of Medicine Biomedical Engineering Research Center
SEA471Hu	Human	Acta Biomaterialia	6.008	19963080	Key Laboratory of Bio-Rheology Science and Technology, Ministry of Education, College of Bioengineering, Chongqing University
SEA471Mu	Mouse	Oncotarget	5.168	28060768	Department of Life Sciences, National Chung Hsing University
SEA471Ra	Rat	Materials Science & Engineering C-Materials for Biological Applications	5.08	30033316	National Taiwan University Institute of Biotechnology

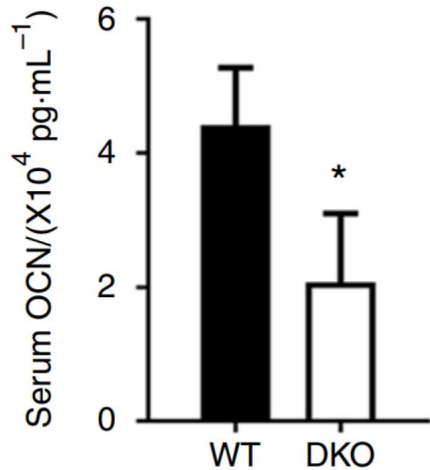


Figure. Concentration of OSTEOCALCIN (OCN, n = 12) in serum tested by ELISA assay. (Ling Ye, 2018)

(Product No.: SEA471Mu Sample type: serum)

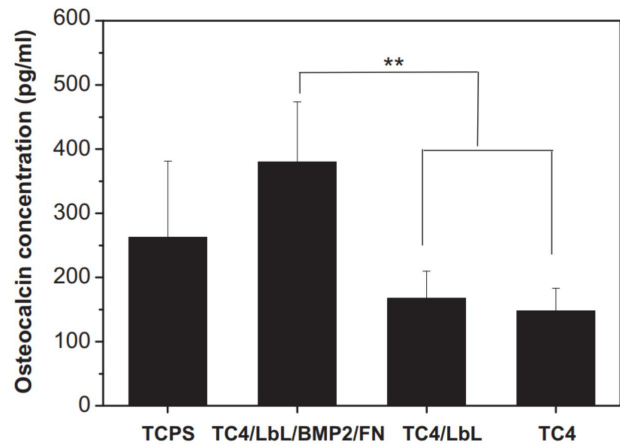


Figure. Osteocalcin production of MSCs cultured on different substrates for 21 days. (Yan Hu, 2012)

(Product No.: SEA471Hu Sample type: serum)

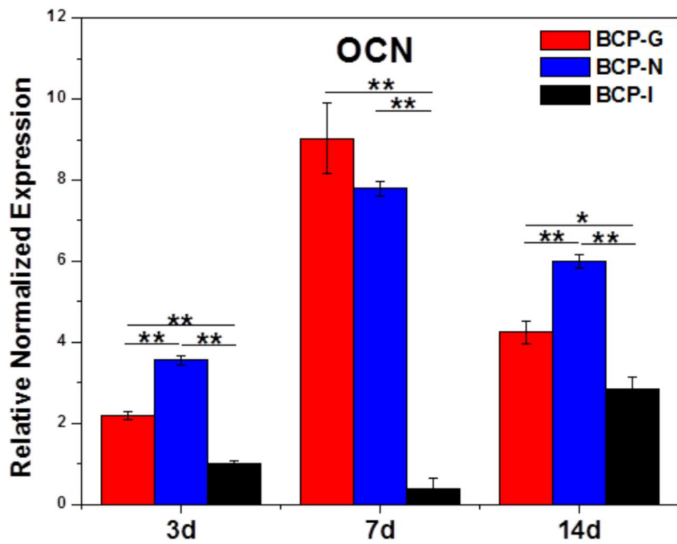


Figure. Expression of osteogenic genes - ALP, OSX, OCN and BSP in BMSCs cultured on BCP-G, BCP-N and BCP-I. (Xiangfeng Li, 2018)

(Product No.: SEA471Hu Sample type: serum)

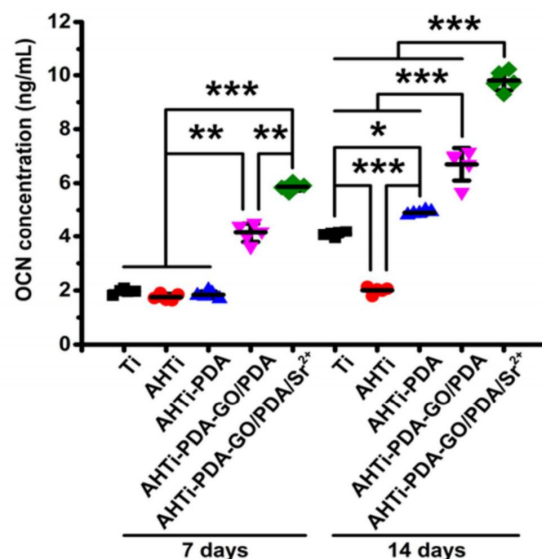


Figure. OCN production of MSCs adhered to the different Ti materials after incubation for 7 and 14 days. (Kui Xu, 2018)

(Product No.: SEA471Ra Sample type: cell supernatant)

### 3.Citation statistics of OC target related products (Excerpt)

Title	Journal	Product No.
Stabilization of Ca-deficient hydroxyapatite in biphasic calcium phosphate ceramics by adding alginate to enhance their biological performances	Journal of Materials Chemistry B	SEA471Ca
Effect of Dietary Phytase Supplementation on Bone and Hyaline Cartilage Development of Broilers Fed with Organically Complexed Copper in a Cu-Deficient Diet	Biological Trace Element Research	SEA471Ga
Comparison of the Effect of a Standard Inclusion Level of Inorganic Zinc to Organic Form at Lowered Level on Bone Development in Growing Male Ross Broiler Chickens	Annals of Animal Science	SEA471Ga
Regulation of the differentiation of mesenchymal stem cells in vitro and osteogenesis in	Biomaterials	SEA471Hu

vivo by microenvironmental modification of titanium alloy surfaces		
Surface engineering of titanium with potassium hydroxide and its effects on the growth behavior of mesenchymal stem cells	Acta Biomaterialia	SEA471Hu
Valvular osteoclasts in calcification and aortic valve stenosis severity.	International Journal of Cardiology	SEA471Hu
Synthesis of polypyrrole nanowires with positive effect on MC3T3-E1 cell functions through electrical stimulation	Materials Science & Engineering C-Materials for Biological Applications	SEA471Hu
Magnesium prevents phosphate-induced calcification in human aortic vascular smooth muscle cells	Nephrology Dialysis Transplantation	SEA471Hu
Osteogenic commitment and differentiation of human mesenchymal stem cells by low-intensity pulsed ultrasound stimulation.	Journal of Cellular Physiology	SEA471Hu
Low-intensity pulsed ultrasound-induced ATP increases bone formation via the P2X7 receptor in osteoblast-like MC3T3-E1 cells	FEBS Letters	SEA471Hu
Comparative effects of brown and golden flaxseeds on body composition, inflammation and bone remodelling biomarkers in perimenopausal overweight women	Journal of Functional Foods	SEA471Hu
Enhanced biocompatible and hemocompatible nano/micro porous surface as a biological scaffold for functionalizational and biointegrated implants	Journal of Alloys and Compounds	SEA471Hu
Micromolar Levels of Sodium Fluoride Promote Osteoblast Differentiation Through Runx2 Signaling	Biological Trace Element Research	SEA471Hu
The use of Tri-Calcium Phosphate (TCP) and stem cells for the regeneration of osteoperiosteal critical-size mandibular bony defects, an in vitro and preclinical study	Journal of Cranio-Maxillofacial Surgery	SEA471Hu
Toward the Development and Characterization of an Easy Handling Sheet-Like Biohybrid Bone Substitute	Tissue Eng Part A.	SEA471Hu
A novel osteoporosis model with ascorbic acid deficiency in Akr1A1 gene knockout mice	Oncotarget	SEA471Mu
Body fat loss induced by calcium in co-supplementation with conjugated linoleic acid is associated with increased expression of bone formation genes in adult mice	J Nutr Biochem	SEA471Mu
Synthesis of polypyrrole nanowires with positive effect on MC3T3-E1 cell functions through electrical stimulation.	Materials Science & Engineering C-Materials for Biological Applications	SEA471Mu
Evidence of the Role of R-Spondin 1 and Its Receptor Lgr4 in the Transmission of Mechanical Stimuli to Biological Signals for Bone Formation.	International Journal of Molecular Sciences	SEA471Mu
Dyslipidemic high-fat diet affects adversely bone metabolism in mice associated with impaired antioxidant capacity	Nutrition	SEA471Mu
Fast and long acting neoflavonoids dalbergin isolated from Dalbergia sissoo heartwood is osteoprotective in ovariectomized model of osteoporosis: Osteoprotective ...	Biomedicine & Pharmacotherapy	SEA471Mu
Icaritin induces MC3T3-E1 subclone14 cell differentiation through estrogen receptor-mediated ERK1/2 and p38 signaling activation.	Biomedicine & pharmacotherapy	SEA471Mu
Chronic exposure to low concentrations of strontium 90 affects bone physiology but not the hematopoietic system in mice	Journal of Applied Toxicology	SEA471Mu
Osteogenic activity of silymarin through enhancement of alkaline phosphatase and osteocalcin in osteoblasts and tibia-fractured mice	Experimental Biology and Medicine	SEA471Mu
MiR- 142- 5p promotes bone repair by maintaining osteoblast activity	Journal of bone and mineral metabolism	SEA471Mu
Micromolar Levels of Sodium Fluoride Promote Osteoblast Differentiation Through Runx2 Signaling	Biological Trace Element Research	SEA471Mu
Inhibition of osteoclast activation by phloretin through disturbing $\alpha\beta3$ integrin-c- <i>Src</i> pathway	BioMed Research International	SEA471Mu
Puerarin promotes osteogenesis and inhibits adipogenesis in vitro	Chinese Medicine	SEA471Mu
Effect of the “protein diet” and bone tissue	Nutricion Hospitalaria	SEA471Mu

Biological Evaluation of a Prototype Material made of Polyglycolic Acid and Hydroxyapatite	Journal of hard Tissue Biology	SEA471Mu
Postnatal administration of 2-oxoglutaric acid improves articular and growth plate cartilages and bone tissue morphology in pigs prenatally treated with dexamethasone	Journal of Physiology and Pharmacology	SEA471Po
Chronic exposure to low concentrations of strontium 90 affects bone physiology but not the hematopoietic system in mice	Journal of Applied Toxicology	SEA471Po
Immobilizing osteogenic growth peptide with and without fibronectin on a titanium surface: effects of loading methods on mesenchymal stem cell differentiation	International Journal of Nanomedicine	SEA471Ra
The effects of strength training and raloxifene on bone health in aging ovariectomized rats	Bone	SEA471Ra
Noni leaf and black tea enhance bone regeneration in estrogen-deficient rats.	Nutrition	SEA471Ra
The controlled release of simvastatin from TiO <sub>2</sub> nanotubes to promote osteoblast differentiation and inhibit osteoclast resorption	Applied Surface Science	SEA471Ra
Effects of fluoride on insulin signaling and bone metabolism in ovariectomized rats	Journal of Trace Elements in Medicine and Biology	SEA471Ra
Ginsenosides Rg3 attenuates glucocorticoid-induced osteoporosis through regulating BMP-2/BMPRII/Runx2 signaling pathway	Chemico-Biological Interactions	SEA471Ra
Treatment with Carnitine Enhances Bone Fracture Healing under Osteoporotic and/or Inflammatory Conditions	Basic & Clinical Pharmacology & Toxicology	SEA471Ra
Anti-osteoporotic effects of an antidepressant tianeptine on ovariectomized rats	Biomedicine & Pharmacotherapy	SEA471Ra
Exendin-4 increases bone mineral density in type 2 diabetic OLETF rats potentially through the down-regulation of SOST/sclerostin in osteocytes	Life Sciences	SEA471Ra
Oral administration of kaempferol inhibits bone loss in rat model of ovariectomy-induced osteopenia	Pharmacological Reports	SEA471Ra
Curcumin alleviates glucocorticoid-induced osteoporosis through the regulation of the Wnt signaling pathway	Int J Mol Med	SEA471Ra
Effect of Sodium Fluoride on Bone Biomechanical and Histomorphometric Parameters and on Insulin Signaling and Insulin Sensitivity in Ovariectomized Rats.	Biological Trace Element Research	SEA471Ra
Oxytocin promotes bone formation during the alveolar healing process in old acyclic female rats	Archives of Oral Biology	SEA471Ra
Antiosteoporotic effect of icariin in ovariectomized rats is mediated via the Wnt/ $\beta$ -catenin pathway	Experimental And Therapeutic Medicine	SEA471Ra
The influence of bexarotene, a selective agonist of the retinoid receptor X (RXR), and tazarotene, a selective agonist of the retinoid acid receptor (RAR), on bone metabolism in rats	Advances in Medical Sciences	SEA471Ra
Serum changes induced by intramedullary experimental administration of bisphosphonates	Romanian Journal of Morphology and Embryology	SEA471Ra
The use of TriCalcium Phosphate (TCP) and stem cells for the regeneration of osteoperiosteal critical-size mandibular bony defects, an in vitro and preclinical study	Journal of Cranio-Maxillofacial Surgery	SEA471Rb
Serum N-terminal telopeptide of type I collagen as an early marker of fracture nonunion in rabbits.	Experimental and Therapeutic Medicine	SEA471Rb
N-terminal telopeptides of type I collagen and bone mineral density for early diagnosis of nonunion: An experimental study in rabbits.	Indian Journal of Orthopaedics	SEA471Rb

(For more information, please visit: [www.cloud-clone.com](http://www.cloud-clone.com)/[www.uscnk.cn](http://www.uscnk.cn))

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