

Datasheet for ABIN2859337  
**Osteoactivin ELISA Kit**



[Go to Product page](#)

1 Image

## Overview

Quantity:	96 tests
Target:	Osteoactivin (GPNMB)
Binding Specificity:	AA 23-502
Reactivity:	Mouse
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 Mouse Osteoactivin/GPNMB
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Serum, Plasma (heparin), Plasma (EDTA)
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: NSO Immunogen sequence: K23-N502
Specificity:	Expression system for standard: NSO Immunogen sequence: K23-N502
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

## Product Details

Sensitivity: <10pg/mL

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

## Target Details

Target: Osteoactivin (GPNMB)

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

Background: Protein Function: Could be a melanogenic enzyme. .  
Background: Transmembrane glycoprotein NMB is a protein that is encoded by the GPNMB gene. In osteoblast progenitor cells, GPNMB works as a positive regulator of osteoblast differentiation during later stages of matrix maturation and mineralization that is mediated at least in part by BMP-2 in a SMAD1 dependent manner to promote osteoblast differentiation. GPNMB can enhance the repairing process in bone fracture, demonstrated by its high expression during chondrogenesis(soft callus) and osteogenesis(hard callus) compared to the intact femurs that is why Osteoactivin(OA) could be a novel therapeutic agent used to treat generalized osteoporosis or localized osteopenia during fracture repair by stimulating bone growth and regeneration. Similarly, GPNMB expression increases during osteoclast differentiation and it is functionally implicated in this process, possibly by promoting the fusion of osteoclast progenitor cells.  
Synonyms: Transmembrane glycoprotein NMB,DC-HIL,Dendritic cell-associated transmembrane protein,Osteoactivin,Gpnmb,Dchil, Hgfin, Nmb,  
Full Gene Name: Transmembrane glycoprotein NMB  
Cellular Localisation: Cell membrane, Single-pass type I membrane protein . Endomembrane system, Single-pass type I membrane protein . Cytoplasmic vesicle membrane, Single-pass type I membrane protein . Melanosome . Vesicular, endosomal like structures.

Gene ID: 93695

UniProt: [Q99P91](#)

## Application Details

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.

## Application Details

Comment:	<p>Sequence similarities: Belongs to the PMEL/NMB family.</p> <p>Tissue Specificity: In early development, mRNA is detected at high levels in the outer layer of the retina. Later in development expression gets restricted to the retinal pigment epithelium and iris. Overexpressed in mammary cancer cells possessing a strong bone metastatic phenotype. .</p>
Plate:	Pre-coated
Protocol:	<p>mouse Osteoactivin ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for Osteoactivin has been precoated onto 96-well plates. Standards(NSO, K23-N502) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for Osteoactivin 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 mouse Osteoactivin amount of sample captured in plate.</p>
Assay Procedure:	<p>Aliquot 0.1 mL per well of the 10,000pg/mL, 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 313pg/mL, 156pg/mL mouse Osteoactivin 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 mouse cell culture supernates, serum or plasma(heparin, EDTA) to each empty well. See "Sample Dilution Guideline" above for details. We recommend that each mouse Osteoactivin standard solution and each sample is measured in duplicate.</p>

Assay Precision:	<ul style="list-style-type: none"><li>• Sample 1: n=16, Mean(pg/ml): 1174, Standard deviation: 64.57, CV(%): 5.5</li><li>• Sample 2: n=16, Mean(pg/ml): 3248, Standard deviation: 207.9, CV(%): 6.4</li><li>• Sample 3: n=16, Mean(pg/ml): 5532, Standard deviation: 271.1, CV(%): 4.9,</li><li>• Sample 1: n=24, Mean(pg/ml): 1354, Standard deviation: 82.6, CV(%): 6.1</li><li>• Sample 2: n=24, Mean(pg/ml): 3426, Standard deviation: 246.7, CV(%): 7.2</li><li>• Sample 3: n=24, Mean(pg/ml): 5840, Standard deviation: 315.4, CV(%): 5.4</li></ul>
------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Restrictions:	For Research Use only
---------------	-----------------------

## Handling

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

Mouse Osteoactivin ELISA Kit

ELISA

**Image 1.** Mouse Osteoactivin/GPNMB PicoKine ELISA Kit standard curve

