APB092Ra61 100μg
Active Bone Sialoprotein (BSP)
Organism Species: *Rattus norvegicus (Rat)*
Instruction manual

FOR RESEARCH USE ONLY
NOT FOR USE IN CLINICAL DIAGNOSTIC PROCEDURES

13th Edition (Revised in Aug, 2023)

[PROPERTIES]

Source: Eukaryotic expression.
Host: 293F cell
Residues: Phe17~Gln320
Tags: N-terminal His-tag
Purity: >90%
Endotoxin Level: <1.0EU per 1μg (determined by the LAL method).
Buffer Formulation: PBS, pH7.4, containing 5% Trehalose .
Original Concentration: 200μg/mL
Applications: Cell culture; Activity Assays.
(May be suitable for use in other assays to be determined by the end user.)
Predicted isoelectric point: 3.8
Predicted Molecular Mass: 35.2kDa
Accurate Molecular Mass: 35kDa as determined by SDS-PAGE reducing conditions.

[USAGE]

Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.

[STORAGE AND STABILITY]

Storage: Avoid repeated freeze/thaw cycles.
Store at 2-8°C for one month.
Aliquot and store at -80°C for 12 months.
Stability Test: The thermal stability is described by the loss rate. The loss rate was determined by accelerated thermal degradation test, that is, incubate the

protein at 37ºC for 48h, and no obvious degradation and precipitation were observed. The loss rate is less than 5% within the expiration date under appropriate storage condition.

[SEQUENCE]

FSMKNFHRRIKAEDSEENGVFKYRPRYFLYKHATYFYPPLKRFPVQGGSDSSEENGDGDSS
EEEGEEEETSNEEENNEDSEGNEDQEAEAENATLSGVTASYGVETTADAGKLELAALQLP
KKAGDAEGKAPKMKESDEEEEEEEEENENEEAEVDENEQVVNGTSTNSTEVDGGNGP
SGGDNGEEAEEASVTEAGAEGTTAGVRELTSYGTTTAVLLNGFQQTTPPPEAYGTTSPPA
RKSSTVEYGEEYEQIGNEYNTAYETYDENNGEPRGDTYRAYEDEYSYYKGHGYEGYEGQ
DYYYHQ

[ACTIVITY]

Bone Sialoprotein (BSP) is a highly glycosylated and phosphorylated non-collagenous protein that plays a pivotal role in mineralized tissues, particularly in bone and dentin. As a member of the small integrin-binding ligand N-linked glycoprotein (SIBLING) family, it is primarily synthesized by osteoblasts, odontoblasts, and chondrocytes, and is prominently localized in the extracellular matrix of mineralizing tissues. Additionally, it also has the function of cell adhesion. Therefore, we measure the activity of recombinant rat BSP by the ability of the immobilized protein to support the adhesion of MDA-MB-231 cells. When 5 x 104 cells/well are added to different concentrations of recombinant rat BSP coated plates, cells will adhere after 2 hour incubation at 37 ℃. The adhesion of MDA-MB-231 cells after 2 hour incubation at 37 ℃ observed by inverted microscope was shown in Figure 1. Cell adherent was in a dose dependent manner, the result was shown in Figure 2, the EC50 was 0.48 μg/ml.

A B

Figure 1.The adhere effect of recombinant rat BSP on MDA-MB-231 cells

(A) MDA-MB-231 cells were seeded into the well containting BSP 1.25 μg/ml and incubated for 2 h at 37 ℃;

(B) MDA-MB-231 cells were seeded into the well without BSP and incubated for 2 h at 37 ℃;

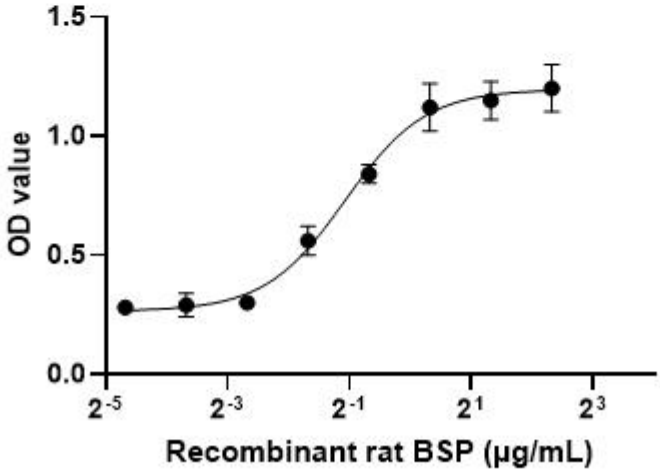

Figure 2. The dose-effect curve of recombinant rat BSP on MDA-MB-231 cells

[IDENTIFICATION]

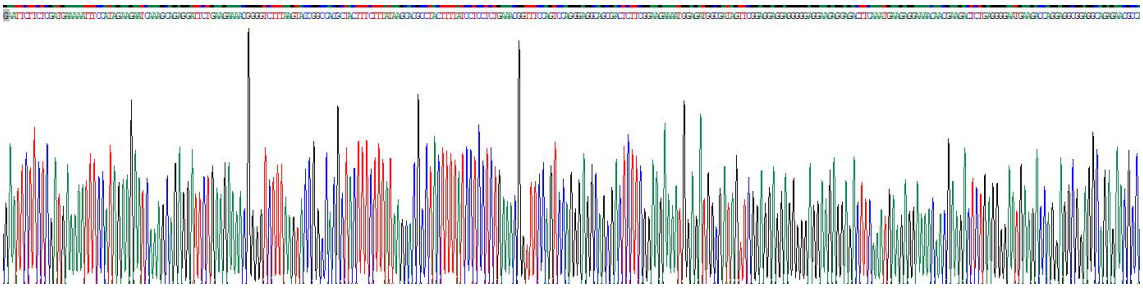

Figure 3. Gene Sequencing (extract)

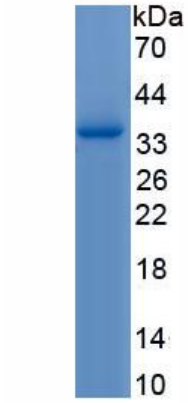

Figure 4. SDS-PAGE

Sample: Active recombinant BSP, Rat

[IMPORTANT NOTE]

The kit is designed for research use only, we will not be responsible for any issue if the kit was used in clinical diagnostic or any other procedures.