Human GPNMB / Osteoactivin Protein (ECD, His Tag)

Catalog Number: 11305-H08H

General Information

Gene Name Synonym:

HGFIN; NMB; Osteoactivin

Protein Construction:

A DNA sequence encoding the human GPNMB isoform 2 (Q14956-2) extracellular domain (Met 1-Pro 474) was fused with a polyhistidine tag at the C-terminus.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: ≥ 95 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per μg of the protein as determined by the LAL method

Predicted N terminal: Ala 22

Molecular Mass:

The recombinant human GPNMB consists of 464 amino acids and predictes a molecular mass of 52.2 kDa. In SDS-PAGE under reducing conditions, the apparent molecular mass of rhGPNMB is approximately 85-90 kDa due to glycosylation.

Formulation:

Lyophilized from sterile PBS, pH 7.4

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Stability & Storage:
Samples are stable for twelve months from date of receipt at -20℃ to -80℃.

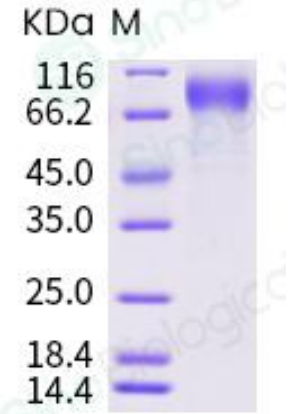
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

GPNMB belongs to the PMEL / NMB family, also known as Osteoactivin and Hematopoietic growth factor-inducible neurokinin 1 (HGFIN), is a transmembrane glycoprotein that is expressed in numerous cells, including osteoclasts, macrophages, dendritic cells, and tumor cells. It is suggested to influence osteoblast maturation, cell adhesion, and migration. GPNMB protein acts as a downstream mediator of BMP-2 effects on osteoblast differentiation and function. GPNMB participates in bone mineralization and functions as a negative regulator of inflammation in macrophages. Osteoactivin is expressed at high levels in normal and inflammatory liver macrophages suggesting a significant role in acute liver injury. The early-phase upregulation of Osteoactivin expression in the tubular epithelium in response to renal injury might play a role in triggering renal interstitial fibrosis via activation of matrix metalloproteinase expression and collagen remodeling in rats. Osteoactivin is a protein that is expressed in aggressive human breast cancers and is capable of promoting breast cancer metastasis to bone.

References

1.Pahl MV. et al., 2010, Clin J Am Soc Nephrol. 5(1): 56-61.
2.Abdelmagid SM. et al., 2008, Exp Cell Res. 314(13): 2334-51.
3.Haralanova-Ilieva B. et al., 2005, J Hepatol. 242(4): 565-72.