GPNMB Antibody / Transmembrane glycoprotein NMB / HGFN (FY13098)

Catalog No.	Formulation	Size
FY13098	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml	100 ug

Bulk quote request

Availability	1-2 days
Species Reactivity	Human, Mouse, Rat
Format	Lyophilized
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Immunogen affinity purified
Buffer	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na_2HPO_4, 0.05mg NaN_3.
UniProt	Q99P91
Applications	Western Blot : 0.25-0.5ug/ml Immunohistochemistry : 2-5ug/ml Immunocytochemistry : 5ug/ml Immunofluorescence : 5ug/ml Flow Cytometry : 1-3ug/million cells ELISA : 0.1-0.5ug/ml
Limitations	This GPNMB antibody is available for research use only.

Description

GPNMB antibody detects Transmembrane glycoprotein NMB, a type I membrane protein involved in cell adhesion, differentiation, and tissue repair. The UniProt recommended name is Transmembrane glycoprotein NMB (GPNMB). Also known as Osteoactivin or HGFN, this glycoprotein is expressed in osteoclasts, melanocytes, macrophages, and tumor cells, where it contributes to cell signaling and microenvironment remodeling.

Functionally, GPNMB antibody identifies a 560-amino-acid glycoprotein with an extracellular domain containing an RGD-like integrin-binding motif, a transmembrane helix, and a short cytoplasmic tail with a tyrosine-based sorting signal. GPNMB facilitates cell-matrix interaction and promotes osteoblast differentiation, pigment cell function, and immune modulation. It is also upregulated during tissue repair and inflammation, reflecting its role in regeneration and immune regulation.

The GPNMB gene is located on chromosome 7p15.2 and encodes a protein expressed in bone, skin, brain, and immune

cells. In macrophages and dendritic cells, GPNMB modulates cytokine release and antigen presentation, while in osteoclasts it contributes to bone resorption and remodeling. The protein undergoes ectodomain shedding, releasing soluble fragments that influence neighboring cells.

Pathologically, GPNMB is overexpressed in several cancers, including melanoma, breast, and glioma, where it promotes migration, invasion, and angiogenesis. It also plays roles in neurodegenerative diseases and inflammation. Because of its surface localization, GPNMB serves as a potential therapeutic target and biomarker. Research using GPNMB antibody supports studies of tumor biology, osteogenesis, and immune signaling.

GPNMB antibody is suitable for western blotting, immunohistochemistry, and flow cytometry to detect membrane-associated and soluble GPNMB. NSJ Bioreagents offers validated GPNMB antibody reagents designed for research in cell adhesion, tumor biology, and tissue regeneration.

Structurally, Transmembrane glycoprotein NMB features multiple N-glycosylation sites contributing to stability and cell-surface expression. The cytoplasmic domain interacts with intracellular adaptors, linking extracellular signals to intracellular pathways. This antibody enables detection of GPNMB in studies of cell communication, repair, and disease progression.

Application Notes

Optimal dilution of the GPNMB antibody should be determined by the researcher.

Immunogen

E.coli-derived mouse GPNMB/Gpnmb recombinant protein (Position: R164-D564) was used as the immunogen for the GPNMB antibody.

Storage

After reconstitution, the GPNMB antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Copyright © NSJ Bioreagents. All rights reserved.