

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Osteoactivin/GPNMB in direct ELISAs and Western blots. In direct ELISAs and Western blots, this antibody does not cross-react with recombinant human Osteoactivin.
Source	Monoclonal Rat IgG _{2B} Clone # 297310
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse Osteoactivin/GPNMB Lys23-Asn502 Accession # NP_444340
Conjugate	Alexa Fluor 594 Excitation Wavelength: 590 nm Emission Wavelength: 617 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. [General Protocols](#) are available in the Technical Information section on our website.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

Osteoactivin (also named GPNMB and DC-HIL) is a 125 kDa, intracellular glycoprotein that is associated with cell endosomal/lysosomal compartments (1, 2). Mouse osteoactivin is synthesized as a type I, transmembrane, 574 amino acid (aa) precursor that contains a 22 aa signal sequence, a 478 aa luminal/extracellular domain, a 23 aa transmembrane segment and a 51 aa cytoplasmic tail. The luminal region contains an N-terminal heparin-binding motif, multiple glycosylation sites, an RGD motif and a 130 aa PKD domain. The intracellular tail also has an RGD motif, plus an ITAM (Y-x-x-I) and lysosomal targeting (L-L) motif. The extracellular/luminal region is 89% and 74% aa identical to the equivalent regions in rat and human, respectively. Cells known to express osteoactivin include osteoblasts, dendritic cells, and melanocytes, plus fetal chondrocytes and stratum basale keratinocytes (2, 3). Osteoactivin is reported to bind to heparan sulfate-proteoglycan, possibly on the surface of fibroblasts and endothelial cells (2). It may also interact with integrins.

PRODUCT SPECIFIC NOTICES

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