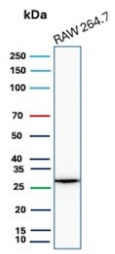
HBEGF Antibody / Heparin-Binding EGFR Ligand and Epithelial Signaling Marker [clone HBEGF/9503] (V5687)

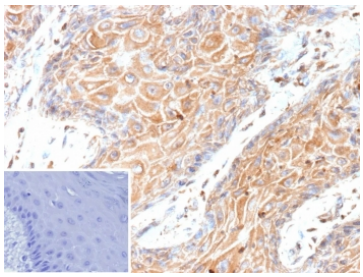
Catalog No.	Formulation	Size
V5687-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5687-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5687SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

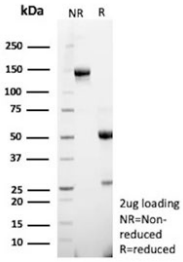
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2b, kappa
Clone Name	HBEGF/9503
Purity	Protein G affinity
UniProt	Q99075
Localization	Cell membrane, Membrane, Secreted
Applications	Immunohistochemistry (FFPE): 1-2ug/ml Western blot: 2-4ug/ml
Limitations	This HBEGF Antibody / Heparin-Binding EGFR Ligand and Epithelial Signaling Marker is available for research use only.



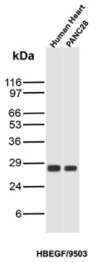
HBEGF Antibody RAW264.7 WB. Western blot analysis of mouse RAW264.7 cell lysate using HBEGF antibody detecting Heparin-binding EGF-like growth factor (HB-EGF), clone HBEGF/9503. A band is observed at approximately 25-30 kDa, consistent with the predicted molecular weight of HBEGF, with possible upward shift reflecting glycosylation and processing of the membrane-associated precursor protein (proHB-EGF). This pattern aligns with the known biology of HBEGF as a heparin-binding EGFR ligand that undergoes proteolytic shedding to generate soluble signaling forms.



HBEGF Antibody Skin IHC. Immunohistochemistry analysis of FFPE human skin tissue stained with HBEGF antibody detecting Heparin-binding EGF-like growth factor (HB-EGF), clone HBEGF/9503. Epidermal keratinocytes show membranous and cytoplasmic staining, consistent with expression of proHB-EGF at the cell surface and its role as a heparin-binding EGFR ligand involved in epithelial signaling and tissue repair. The staining pattern highlights epithelial cell layers, while underlying dermal components show comparatively lower signal. The inset shows a PBS-only negative control processed without primary antibody, confirming minimal non-specific background staining. Hematoxylin counterstain highlights nuclei in blue. HIER: boil tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free HBEGF antibody (clone HBEGF/9503) as confirmation of integrity and purity.



HBEGF Antibody Heart and PANC28 WB. Western blot analysis of human heart and PANC28 cell lysates using HBEGF antibody detecting Heparin-binding EGF-like growth factor (HB-EGF), clone HBEGF/9503. A band is detected at approximately 25-30 kDa in both samples, consistent with the predicted molecular weight of HBEGF, with size reflecting glycosylation and processing of the membrane-associated precursor (proHB-EGF). This pattern aligns with the biology of HBEGF as a heparin-binding EGFR ligand that undergoes regulated shedding to generate soluble signaling forms in both normal tissue and carcinoma-derived cells.

Description

Heparin-binding EGF-like growth factor (HBEGF) is a member of the epidermal growth factor family distinguished by its ability to bind heparin and function as a potent ligand for the epidermal growth factor receptor (EGFR). HBEGF is synthesized as a membrane-anchored precursor protein (proHB-EGF) that participates in juxtacrine signaling at the cell surface and can be proteolytically cleaved by metalloproteases such as ADAM family members to release a soluble growth factor. HBEGF Antibody, clone HBEGF/9503, is a mouse monoclonal antibody designed to detect this biologically active growth factor across epithelial and other cell types.

HBEGF plays a central role in regulating cell proliferation, migration, and survival through activation of EGFR and related signaling pathways. Upon ligand binding, EGFR undergoes dimerization and phosphorylation, initiating downstream cascades such as MAPK and PI3K-AKT signaling. These pathways are critical for normal tissue development, epithelial maintenance, and regenerative responses, placing HBEGF within a core network of growth factor-mediated cellular communication.

In tissues, HBEGF expression is commonly associated with epithelial cells, smooth muscle cells, macrophages, and certain stromal populations. The protein localizes to the plasma membrane in its precursor form and may also be detected in the cytoplasm due to intracellular processing and trafficking. Following proteolytic shedding, the soluble form can diffuse to act on neighboring cells, extending its signaling range within the local microenvironment. This dual membrane-bound and soluble behavior distinguishes HBEGF from many other EGFR ligands and supports its role in coordinating both localized and paracrine signaling events.

HBEGF has been implicated in a variety of disease processes, including cancer, cardiovascular disease, and inflammatory conditions. In tumor biology, increased HBEGF expression has been reported in multiple carcinoma types,

where it may contribute to enhanced proliferation, invasion, and tumor microenvironment interactions through sustained EGFR activation. Its involvement in regulated shedding and extracellular signaling further links it to dynamic changes in cell communication during disease progression.

Beyond oncology, HBEGF contributes to tissue repair and regeneration, particularly in epithelial and vascular systems where rapid cellular responses are required following injury. Its capacity to function as both a membrane-associated signaling molecule and a diffusible growth factor highlights its importance in integrating structural and signaling roles within tissues. These characteristics support the use of an HBEGF Antibody for investigating EGFR ligand biology, epithelial signaling, and disease-associated alterations in growth factor regulation.

This antibody is part of a broader antibody panel offered by NSJ Bioreagents.

Application Notes

Optimal dilution of the HBEGF Antibody / Heparin-Binding EGFR Ligand and Epithelial Signaling Marker should be determined by the researcher.

Immunogen

A portion of amino acids 1-208 from human Heparin-binding EGF-like growth factor protein was used as the immunogen for the HBEGF antibody.

Storage

Aliquot the HBEGF antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

HBEGF antibody, HB-EGF antibody, Heparin binding EGF like growth factor antibody, DTR antibody, ProHB-EGF antibody, clone HBEGF/9503 antibody

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