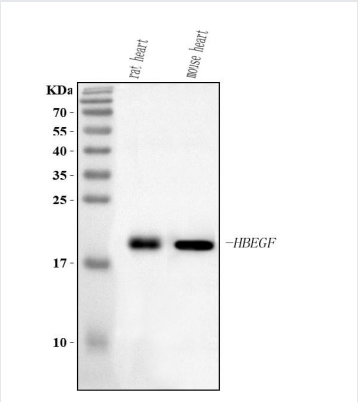
HBEGF Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

Product Name	Hbegf, Polyclonal Antibody
Full Product Name	Anti-Hbegf Antibody Picoband
Product Gene Name	anti-Hbegf antibody
Product Synonym Names	methyltransferase like 3; N6-adenosine-methyltransferase catalytic subunit
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Mouse, Rat
Form/Format	Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Purity/Purification	Immunogen affinity purified.
Specificity	Widely expressed at low level.Expressed in spleen, thymus, prostate, testis, ovary, small intestine, colon and peripheral blood leukocytes.
Preparation and Storage	At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months.Avoid repeated freezing and thawing.
Molecular Weight	22,808 Da
3D Structure	ModBase 3D Structure for Q06186
Immunogen	E coli-derived mouse Hbegf recombinant protein (Position: D63-L148).
Subcellular Localization	Nucleus
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.
Cross Reactivity	No cross-reactivity with other proteins.

Protein Function	The METTL3-METTL14 heterodimer forms a N6- methyltransferase complex that methylates adenosine residues at the N (6) position of some RNAs and regulates various processes such as the circadian clock, differentiation of embryonic and haematopoietic stem cells, cortical neurogenesis, response to DNA damage, differentiation of T-cells and primary miRNA processing (PubMed:22575960, PubMed:24284625, PubMed:25719671, PubMed:25799998, PubMed:26321680, PubMed:26593424, PubMed:27627798, PubMed:27373337, PubMed:27281194, PubMed:28297716, PubMed:9409616). In the heterodimer formed with METTL14, METTL3 constitutes the catalytic core (PubMed:27627798, PubMed:27373337, PubMed:27281194). N6-methyladenosine (m6A), which takes place at the 5'-[AG]GAC-3' consensus sites of some mRNAs, plays a role in mRNA stability, processing, translation efficiency and editing (PubMed:22575960, PubMed:24284625, PubMed:25719671, PubMed:25799998, PubMed:26321680, PubMed:26593424, PubMed:28297716, PubMed:9409616). M6A acts as a key regulator of mRNA stability: methylation is completed upon the release of mRNA into the nucleoplasm and promotes mRNA destabilization and degradation (PubMed:28637692). In embryonic stem cells (ESCs), m6A methylation of mRNAs encoding key naive pluripotency-promoting transcripts results in transcript destabilization, promoting differentiation of ESCs (By similarity). M6A regulates the length of the circadian clock: acts as an early pace-setter in the circadian loop by putting mRNA production on a fast-track for facilitating nuclear processing, thereby providing an early point of control in setting the dynamics of the feedback loop (By similarity). M6A regulates spermatogonial differentiation and meiosis and is essential for male fertility and spermatogenesis (By similarity). Involved in the response to DNA damage: in response to ultraviolet irradiation, METTL3 rapidly catalyzes the formation of m6A on poly (A) transcripts at DNA damage sites, leading to the recruitment of POLK to DNA damage sites (PubMed:28297716). M6A is also required for T-cell homeostasis and differentiation: m6A methylation of transcripts of SOCS family members (SOCS1, SOCS3 and CISH) in naive T-cells promotes mRNA destabilization and degradation, promoting T-cell differentiation (By similarity). M6A also takes place in other RNA molecules, such as primary miRNA (pri-miRNAs)(PubMed:25799998). M6A also regulates cortical neurogenesis: m6A methylation of transcripts related to transcription factors, neural stem cells, the cell cycle and neuronal differentiation during brain development promotes their destabilization and decay, promoting differentiation of radial glial cells (By similarity). METTL3 mediates methylation of pri-miRNAs, marking them for recognition and processing by DGCR8 (PubMed:25799998). Acts as a positive regulator of mRNA translation independently of the methyltransferase activity: promotes translation by interacting with the translation initiation machinery in the cytoplasm (PubMed:27117702). Its overexpression in a number of cancer cells suggests that it may participate to cancer cell proliferation by promoting mRNA translation (PubMed:27117702).
Product Categories/Family for anti-Hbegf antibody	Primary Antibodies; DNA/Nucleotides; DNA/RNA; Epigenetics and Nuclear Signaling; RNA Processing
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-Hbegf antibody	Western Blot (WB), ELISA (EIA)
Application Notes for anti-Hbegf antibody	WB: 0.25-0.5ug/ml, Mouse, Rat ELISA: 0.1-0.5ug/ml
Related Product Information for anti-Hbegf antibody	The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Product References and Citations for anti-Hbegf antibody	1. Bollee, G., Flamant, M., Schordan, S., Fligny, C., Rumpel, E., Milon, M., Schordan, E., Sabaa, N., Vandermeersch, S., Galaup, A., Rodenas, A., Casal, I., and 14 others. Epidermal growth factor receptor promotes glomerular injury and renal failure in rapidly progressive crescentic glomerulonephritis. Nature Med. 17: 1242-1250, 2011. Note: Erratum: Nature Med. 17: 1521 only, 2011. 2. Chang, T.-M., Neville, D. M., Jr. Demonstration of diphtheria toxin receptors on surface membranes from both toxin-sensitive and toxin-resistant species. J. Biol. Chem. 253: 6866-6871, 1978. 3. Creagan, R. P., Chen, S.-H., Ruddle, F. H. Genetic analysis of the cell surface: association of human chromosome 5 with sensitivity to diphtheria toxin in mouse-human somatic cell hybrids. Proc. Nat. Acad. Sci. 72: 2237-2241, 1975.
Other Notes	Small volumes of anti-Hbegf antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for Hbegf purchase	MBS1758231 is an antibody targeting Hbegf. Also known as Anti-Hbegf Antibody Picoband. Reactive in Mouse, Rat. Host: Rabbit.



Western Blot (WB) of anti-Hbegf antibody

Figure 1. Western blot analysis of Hbegf using anti-Hbegf antibody (MBS1758231).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.Lane 1: rat heart tissue lysates,Lane 2: mouse heart tissue lysates.After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-Hbegf antigen affinity purified polyclonal antibody (#MBS1758231) at 0.5ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (#MBS176460) with Tanon 5200 system. A specific band was detected for Hbegf at approximately 20 kDa. The expected band size for Hbegf is at 23 kDa.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Hbegf. It may not necessarily be applicable to this product.

NCBI GI #	6754178
NCBI GeneID	15200
NCBI Accession #	NP_034545.1
UniProt Primary Accession #	Q06186
UniProt Related Accession #	Q06186
GenBank Nucleotide #	NM_010415.2
NCBI Official Full Name	proheparin-binding EGF-like growth factor
NCBI Official Synonym Full Names	heparin-binding EGF-like growth factor
NCBI Official Symbol	Hbegf
NCBI Official Synonym Symbols	Dtr; Dts; Hegfl; AW047313
UniProt Protein Name	Proheparin-binding EGF-like growth factor
Protein Family	Proheparin-binding EGF-like growth factor
UniProt Gene Name	Hbegf
UniProt Synonym Gene Names	Dtr; Hegfl; HB-EGF; HBEGF
UniProt Entry Name	HBEGF_MOUSE
NCBI Protein Information	proheparin-binding EGF-like growth factor; diphtheria toxin receptor; heparin binding epidermal growth factor-like growth factor

UniProt Comments for Hbegf	HBEGF: Growth factor that mediates its effects via EGFR, ERBB2 and ERBB4. Required for normal cardiac valve formation and normal heart function. Promotes smooth muscle cell proliferation. May be involved in macrophage-mediated cellular proliferation. It is mitogenic for fibroblasts, but not endothelial cells. It is able to bind EGF receptor/EGFR with higher affinity than EGF itself and is a far more potent mitogen for smooth muscle cells than EGF. Also acts as a diphtheria toxin receptor. Protein type: Cell surface; Membrane protein, integral Cellular Component: extracellular space; cell surface; membrane; integral to plasma membrane; extracellular region; plasma membrane; integral to membrane Molecular Function: heparin binding; growth factor activity; epidermal growth factor receptor binding Biological Process: positive regulation of keratinocyte migration; epidermal growth factor receptor signaling pathway; positive regulation of protein kinase B signaling cascade; cell migration; positive regulation of smooth muscle cell proliferation; negative regulation of elastin biosynthetic process; angiogenesis; blastocyst growth; positive regulation of cell growth; regulation of heart contraction; positive regulation of cell migration; wound healing, spreading of epidermal cells
Research Articles on Hbegf	**1.** miR-96 promotes osteogenic differentiation by inhibiting HB-EGF and by blocking the HB-EGF-EGFR signaling pathway in osteoblastic cells
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