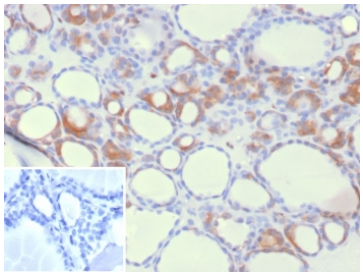
HEG1 Antibody / Heart Development Protein Detection Antibody [clone HEG1/9445] (V5781)

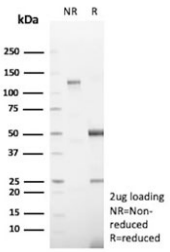
Catalog No.	Formulation	Size
V5781-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5781-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5781SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	HEG1/9445
Purity	Protein G affinity
UniProt	Q9ULI3
Localization	Cell junction, Cell membrane, Cytoplasm, Secreted
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml
Limitations	This HEG1 antibody is available for research use only.



HEG1 Antibody Thyroid IHC. Immunohistochemical analysis of Heart development protein with EGF-like domains 1 (HEG1) in formalin-fixed, paraffin-embedded human thyroid tissue using HEG1 antibody clone HEG1/9445. Distinct membranous and cytoplasmic staining is observed in thyroid follicular epithelial cells, outlining follicular structures, with additional staining in vascular-associated endothelial cells. The staining pattern is consistent with HEG1 localization at cell-cell interfaces and supports its role in tissue organization and endothelial function. Inset: PBS used in place of primary antibody serves as a negative control for secondary antibody binding. Required HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.



SDS-PAGE analysis of purified, BSA-free HEG1 antibody (clone HEG1/9445) as confirmation of integrity and purity.

Description

Heart development protein with EGF-like domains 1 (HEG1) is a transmembrane protein that plays a critical role in cardiovascular development and endothelial cell function. HEG1 is predominantly expressed in endothelial cells, where it contributes to vascular integrity, cell-cell interactions, and signaling pathways that regulate vessel formation and maintenance. HEG1 is localized to the plasma membrane, particularly at cell junctions, where it interacts with intracellular scaffolding proteins to support endothelial stability and morphogenesis. The HEG1 Antibody is designed to detect this membrane-associated protein, supporting studies of vascular biology and tissue organization.

HEG1 antibody, also referred to as Heart development protein with EGF-like domains 1 antibody in the literature, recognizes a large glycosylated protein containing multiple extracellular EGF-like domains. HEG1 is widely studied for its role in embryonic cardiovascular development, where it is essential for proper heart and vessel formation. Loss of HEG1 function has been associated with defects in vascular integrity and cardiac morphogenesis, highlighting its importance in developmental signaling pathways.

Structurally, HEG1 is characterized by a large extracellular domain with multiple EGF-like repeats, a single transmembrane region, and a cytoplasmic tail that interacts with proteins such as KRIT1 (CCM1) to regulate endothelial junction stability. This interaction is part of a signaling complex involved in maintaining vascular barrier function and preventing abnormal vessel permeability. The protein undergoes glycosylation, contributing to its relatively high apparent molecular weight and potential variability in migration during SDS-PAGE analysis.

Functionally, HEG1 is a key regulator of endothelial cell behavior, influencing cell adhesion, migration, and vascular patterning. It plays an important role in maintaining the integrity of blood vessels and is involved in signaling pathways that control angiogenesis and vascular remodeling. In addition to its role in development, HEG1 expression has been observed in adult tissues, particularly in vascularized organs, where it continues to support endothelial function.

Immunohistochemical analysis of human thyroid tissue demonstrates HEG1 expression with membranous and cytoplasmic staining in epithelial and vascular-associated cells, consistent with its role in cell-cell interaction and tissue organization. This staining pattern highlights its presence in structured glandular tissue and supports its utility in examining epithelial and endothelial compartments.

Clone HEG1/9445 is a mouse monoclonal antibody designed to detect HEG1 with specificity in relevant biological samples. Its ability to identify HEG1 in tissue sections supports applications in studies of vascular biology, developmental processes, and diseases involving endothelial dysfunction. This antibody provides a useful tool for investigating the role of HEG1 in tissue architecture, cell signaling, and organ development.

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

Application Notes

Optimal dilution of the HEG1 Antibody / Heart Development Protein Detection Antibody should be determined by the researcher.

Immunogen

A portion of amino acids 1-400 from human HEG1 protein was used as the immunogen for the HEG1 antibody.

Storage

Aliquot the HEG1 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

HEG1 antibody, Heart development protein with EGF-like domains 1 antibody, HEG1 endothelial antibody, HEG1 membrane protein antibody, HEG1 IHC antibody