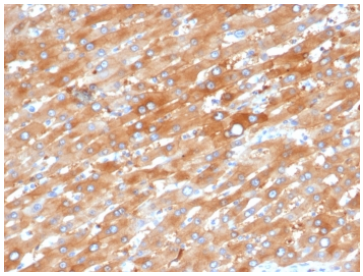
EPHB4 Antibody / Receptor Tyrosine Kinase Antibody [clone EPHB4/6392] (V5211)

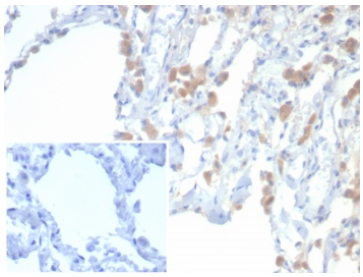
Catalog No.	Formulation	Size
V5211-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V5211-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V5211SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

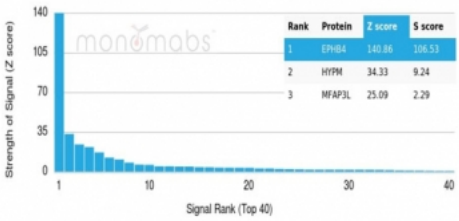
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2, kappa
Clone Name	EPHB4/6392
Purity	Protein A/G affinity
UniProt	P54760
Localization	Membrane, cytoplasm
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This EPHB4 Antibody / Receptor Tyrosine Kinase Antibody is available for research use only.



EPHB4 Antibody Liver Metastasis Colon IHC. Immunohistochemistry analysis of FFPE human liver metastasis in colon tissue using EPHB4 Antibody (clone EPHB4/6392) demonstrates HRP-DAB brown membranous and cytoplasmic staining in tumor cells, consistent with Eph receptor B4 / EPHB4 expression as a receptor tyrosine kinase involved in tumor signaling and vascular interactions, while surrounding stromal components show lower signal; nuclei are counterstained blue. HIER: boil tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min and allow to cool before testing.



EPHB4 Antibody Human Lung IHC. Immunohistochemistry analysis of FFPE human lung tissue using EPHB4 Antibody (clone EPHB4/6392) demonstrates HRP-DAB brown membranous and cytoplasmic staining in epithelial and vascular-associated cells, consistent with Eph receptor B4 / EPHB4 expression as a receptor tyrosine kinase involved in cell signaling and vascular biology, while surrounding stromal elements show lower signal; nuclei are counterstained blue. Inset: PBS used in place of primary antibody shows minimal background staining, confirming specificity. HIER: boil tissue sections in pH 9 10 mM Tris with 1 mM EDTA for 20 min and allow to cool before testing.



EPHB4 Antibody Microarray Specificity Validation. Analysis of a HuProt(TM) microarray containing more than 19,000 full-length human proteins using EPHB4 Antibody (clone EPHB4/6392) demonstrates highly specific detection of Eph receptor B4 / EPHB4, a receptor tyrosine kinase involved in vascular and tumor signaling pathways. The antibody shows a dominant signal for EPHB4 with clear separation from other proteins on the array, supporting strong target specificity of clone EPHB4/6392. Z- and S-score: The Z-score represents the strength of signal generated when the antibody binds to a protein on the array, expressed as standard deviations above the mean signal, while the S-score reflects the difference between sequential Z-scores and indicates relative specificity compared to potential off-target interactions.

Description

Eph receptor B4 (EPHB4) is a transmembrane receptor tyrosine kinase encoded by the EPHB4 gene and expressed in endothelial cells and various epithelial tissues, where it functions as a key regulator of cell-cell communication and vascular development. EPHB4 Antibody / Receptor Tyrosine Kinase Antibody (clone EPHB4/6392) targets this protein, which is primarily localized to the cell membrane with additional cytoplasmic distribution reflecting receptor internalization and signaling activity. EPHB4 antibody, also referred to as Eph receptor B4 antibody and Ephrin receptor B4 antibody in the literature, detects an important signaling receptor involved in developmental and pathological processes. This antibody is part of a collection of Human Protein Microarray validated antibodies that have been screened for specificity across thousands of proteins.

Functionally, EPHB4 plays a central role in bidirectional signaling through interaction with its ligand ephrin-B2, regulating cell adhesion, migration, and boundary formation. This signaling axis is essential for vascular development, particularly in distinguishing venous from arterial endothelial cell identity. Activation of EPHB4 triggers downstream pathways involving phosphorylation cascades that influence cytoskeletal organization, cell positioning, and tissue architecture. As a receptor tyrosine kinase, EPHB4 contributes to dynamic cellular responses in both normal physiology and disease.

EPHB4 expression is observed in endothelial cells of blood vessels as well as in certain epithelial and tumor cell populations. In tissue sections, immunohistochemical staining often highlights membranous and cytoplasmic localization within vascular structures and tumor-associated cells. In cancers such as colon carcinoma and liver tumors, EPHB4 expression has been associated with tumor progression, angiogenesis, and altered cell signaling, reflecting its role in both vascular and tumor biology.

Structurally, EPHB4 consists of an extracellular ligand-binding domain, a single transmembrane region, and an intracellular tyrosine kinase domain responsible for signal transduction. Upon ligand binding, receptor dimerization and autophosphorylation occur, initiating downstream signaling pathways that regulate cell behavior. EPHB4 may also co-localize with other receptor tyrosine kinases and signaling molecules, contributing to complex regulatory networks controlling cell growth and migration.

Altered EPHB4 expression is associated with a variety of pathological conditions, including cancer, vascular disorders, and developmental abnormalities. In oncology, increased EPHB4 signaling has been linked to tumor cell survival, invasion, and angiogenesis, making it a target of interest for therapeutic intervention. In vascular biology, EPHB4 plays a critical role in maintaining vessel integrity and function.

Protein microarray validation demonstrates highly specific binding of this antibody to EPHB4 with minimal off-target interaction, supporting reliable detection of this receptor tyrosine kinase in complex samples. This level of specificity is important for studies requiring accurate identification of signaling proteins involved in vascular and cancer-related pathways.

This antibody provides reliable detection of EPHB4 across tissue-based and protein analysis applications, supporting its use as a receptor tyrosine kinase marker in immunohistochemistry and related assays. An EPHB4 antibody is suitable for detecting this signaling receptor in studies of vascular development, tumor progression, and cell signaling pathways.

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

Application Notes

Optimal dilution of the EPHB4 Antibody / Receptor Tyrosine Kinase Antibody should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 1-200) from the human protein was used as the immunogen for the EPHB4 antibody.

Storage

Aliquot the EPHB4 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

Alternate Names

EPHB4 antibody, Eph receptor B4 antibody, Ephrin receptor B4 antibody, EPHB4 RTK antibody, EphB4 signaling antibody