

EphB4 Protein, Human, Recombinant (His)

General Information

Synonyms:	MYK1;EPH receptor B4;HTK;TYRO11
Protein Construction:	A DNA sequence encoding the extracellular domain (Met 1-Ala 539) of human EphB4 (NP_004435.3) precursor was expressed with a C-terminal polyhistidine tag. Predicted N terminal: Leu 16
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P54760
Molecular Weight:	58.5 kDa (predicted); 72 kDa (reducing conditions due to glycosylation)

QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA. Immobilized human EphB4 at 2 µg/ml (100 µl/well) can bind human EphrinB2 with a linear range of 1-25 ng/ml.
Purity:	> 95% as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing 100 mM Glycine, 10 mM NaCl, 50 mM Tris, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Ephrin type-B receptor 4 is a protein that in humans is encoded by the EPHB4 gene. It is a single-pass type I membrane protein belonging to the ephrin receptor subfamily of protein kinase superfamily. Members of the ephrin and Eph family are local mediators of cell function through largely contact-dependent processes in development and in maturity. Furthermore, EphB4 protein and the corresponding ligand Ephrin-B2 contribute to

tumor growth in various human tumors. EphB4 protein has tumor suppressor activities and that regulation of cell proliferation, extracellular matrix remodeling, and invasive potential are important mechanisms of tumor suppression. Therefore, Ephrin-B2/EphB4 may be recognized as a novel prognostic indicator for cancers.

Reference

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- Kertesz N, et al. (2006) The soluble extracellular domain of EphB4 (sEphB4) antagonizes EphB4-EphrinB2 interaction, modulates angiogenesis, and inhibits tumor growth. *Blood.* 107(6): 2330-8.
- Noren NK, et al. (2007) Paradoxes of the EphB4 receptor in cancer. *Cancer Res.* 67(9): 3994-7.
- Taylor AC, et al. (2007) EphB4 expression along adult rat microvascular networks: EphB4 is more than a venous specific marker. *Microcirculation.* 14(3): 253-67.

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