Data Sheet (Cat.No.TMPY-06635)

TargetMol

EphA2 Protein, Mouse, Recombinant

General Information

Synonyms:	Myk2;Sek2;Sek-2;Eck;EPH receptor A2;AW545284
Protein Construction:	A DNA sequence encoding the mouse EphA2 (NP_034269.2) (Met1-Asn535) was expressed. Predicted N terminal: Ala 20
Species:	Mouse
Expression Host:	HEK293 Cells
Accession:	NP_034269.2
Molecular Weight:	57.03 kDa (predicted); 61.90 kDa (reducing conditions)

QC Testing

Biological Activity:	Immobilized Recombinant Mouse EphA2 Protein (ECD) at 2 μg/ml (100 μl/well) can bind Recombinant Human Ephrin-A1 / EFNA1 Protein (Fc Tag), The EC50 is 1.8-5.4 ng/mL.
Purity:	≥ 90 % as determined by SDS-PAGE. ≥ 95 % as determined by SEC-HPLC.
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 PBS, 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

Eph receptor A2 (Ephrin type-A receptor 2 or EphA2) is a member of the ephrin receptor subfamily of the protein-tyrosine kinase family. The Eph receptors' corresponding family of ligands are the ephrins anchored to cell surfaces. The ephrins and Eph receptors are implicated as positional labels that may guide the development of neural topographic maps. They have also been found implicated in embryonic patterning, neuronal targeting, vascular development and adult neovascularization. The large family of ligands and receptors may make a major

contribution to the accurate spatial patterning of connections and cell position in the nervous system. Furthermore, elevated expression of Eph receptors and ephrin ligands is associated with tumors and associated tumor vasculature, suggesting the Eph receptors and ephrin ligands also play critical roles in tumor angiogenesis and tumor growth. Unlike most Eph kinases, which are primarily expressed during development, EphA2 is primarily found in adult human epithelial cells. The cellular functions of EphA2 may be regulating cell growth, survival, migration, and angiogenesis.Unlike other receptor tyrosine kinases, ligand binding is not necessary for EphA2. Rather, the ligand appears to regulate EphA2 subcellular localization and its interactions with downstream adapter and signaling proteins. Eph receptor A2(EphA2) has been demonstrated to critically regulate tumor cell growth, migration and invasiveness. Eph receptor A2(EphA2) is frequently overexpressed and functionally altered in aggressive tumor cells, and that these changes promote metastatic character.

Reference

Flanagan JG, et al. (1998) The ephrins and Eph receptors in neural development. Annu Rev Neurosci. 21: 309-45.
Cheng N, et al. (2002) The ephrins and Eph receptors in angiogenesis. Cytokine Growth Factor Rev. 13(1): 75-85.
Pratt RL, et al. (2002) Activation of the EphA2 tyrosine kinase stimulates the MAP/ERK kinase signaling cascade. Oncogene. 21(50): 7690-9.
Jennifer Walker-Daniels, et al. (2003) Differential Regulation of EphA2 in Normal and Malignant Cells. Am J Pathol. 162(4): 1037-1042.