Technical Data Sheet

InVivoMAb anti-human EphA2

Attention: Use of this product constitutes an agreement to Bio X Cell's Terms and Conditions which are included with this product in print and can also be found at https://bioxcell.com/terms-and-conditions.

Lot Specific Information

Lot Number: **Lot Specific***
Volume: **Lot Specific***
Concentration: **Lot Specific* (generally 4 to 11 mg/ml) ***
Total Protein: **Lot Specific***

*This information will be noted on the certificate of analysis that ships with this product.

Product Information

Catalog Number:	**BE0410**
Clone:	**SHM16**
Isotype:	Mouse IgG1, κ
Recommended Isotype Control(s):	InVivoMAb mouse IgG1 isotype control, unknown specificity
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Immunogen:	Human melanoma cell line A375
Reported Applications:	*in vitro* stimulation of EphA2 signaling Functional assays Immunoprecipitation Flow cytometry Immunofluorescence
Formulation:	PBS, pH 7.0 Contains no stabilizers or preservatives
Endotoxin:	≤1EU/mg (≤0.001EU/μg) Determined by LAL gel clotting assay
Purity:	≥95% Determined by SDS-PAGE
Sterility:	0.2 μm filtration
Production:	Purified from cell culture supernatant in an animal-free facility
Purification:	Protein G
RRID:	
Molecular Weight:	150 kDa

Description

The SHM16 monoclonal antibody reacts with EPHA2, a transmembrane receptor glycoprotein with widespread expression in epithelial cells. Owing to its cell type-specific expression, EphA2 was originally named epithelial cell kinase (eck), but subsequent experiments revealed its expression in many solid tumors, wherein its overexpression correlates with malignancy and a poor prognosis. Among its eight different interacting ephrin A-family ligands, EphA2 exhibits an overt preference for ephrin A1. Interestingly, ephrin A1's expression pattern is generally observed to be attenuated in EphA2-overexpressing aggressive tumors. EphA2-ephrin A1 signaling regulates proliferation, survival, migration, morphology, cell-to-cell repulsion, and adhesion during embryonic development and controls the processes of angiogenesis and tumorigenesis. The SHM16 antibody, generated by immunizing mice with EphA2-positive human melanoma cells, is reported to interact with an EphA2 epitope differing from that affecting ephrin A1 binding to EphA2, and it doesn't affect EphA2 interaction with ephrin A1 on the cell surface. The internalization of SHM16 through EphA2 has been shown to inhibit the proliferative and metastatic behavior of melanoma cells in vitro. An immunotoxin generated by conjugating the SHM16 antibody with saporin (an intracellular cytotoxin) is reported to exhibit dose-dependent growth inhibition and cytotoxicity in EphA2-positive melanoma cells in vitro, while the immunotoxin did not affect EphA2-negative cells. The SHM16 antibody has been used for characterization of human head and neck cancer cell lines using mass cytometry in Optimized Multicolor

Immunofluorescence Panel-45, i.e., OMIP-45. Like most of the EphA-targeted monoclonal antibodies, SHM16 exhibits an agonist effect, and is reported to activate the EphA2 signaling pathway by mimicking the anti-oncogenic effect of ephrin-A1 on melanoma cell lines.

Storage

Store at the stock concentration at 4°C . **Do not freeze.**
It is not uncommon for a floccule or precipitate to appear during storage. The floccule is typically buffer salts precipitating out of solution or a small bit of protein aggregation. For information on how to remove floccules or precipitates see our FAQ's at https://bioxcell.com/faqs.

Protocol Information

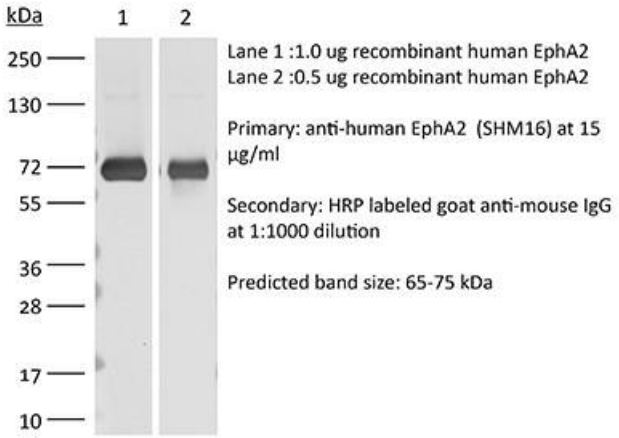
Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.

Application References

For a complete list of references, visit https://bioxcell.com/be0410?bxcs=9k1b3a#tab_references or scan the QR code below.

Binding Validation

Validation data shown below confirms that this clone binds to its target antigen. For lot specific binding validation data, e-mail technicalservice@bioxcell.com.



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