Technical Data Sheet

InVivoMAb anti-human mesothelin

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:	**BE0405**
Clone:	**YP218**
Isotype:	Rabbit IgG
Recommended Isotype Control(s):	InVivoMAb polyclonal rabbit IgG
Recommended Dilution Buffer:	InVivoPure pH 7.0 Dilution Buffer
Reported Applications:	*in vitro* photoimmunotherapy* *in vivo* photoimmunotherapy* Chimeric antigen receptor construction Antibody-drug conjugate synthesis* Functional assays Immunohistochemistry (paraffin) Flow cytometry ELISA *Use of humanized YP218 (see "References")
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 filtered
Production:	Purified from cell culture supernatant in an animal-free facility
Purification:	Protein A
Molecular Weight:	150 kDa

Description

The YP218 monoclonal antibody reacts with a very rare epitope in the C-terminal end (region III, within amino acids 525 to 560) close to the tumor cell surface of human mesothelin (MSLN). MSLN has limited expression in normal tissues, while its expression gets upregulated in many solid tumors, including mesothelioma, epithelial ovarian cancer, pancreatic adenocarcinoma, lung cancer, uterine cancer, and cholangiocarcinoma. MSLN interacts with MUC16/CA125, and it regulates the processes of cell proliferation, growth, and adhesion. Human MSLN is synthesized as a 71-kDa precursor that translocates to the cell surface, where it is cleaved into 31-kDa megakaryocyte potentiating factor (MPF) and 40-kDa mature MSLN. The YP218 antibody has been reported for use in combination with clone YP223 in sandwich ELISAs for the detection of soluble MSLN in human mesothelioma serum samples. The YP218 antibody sequence was used for generating MSLN region III (membrane-proximal region)-targeting Meso3 CAR T cells, which displayed stronger antitumor responses in vivo than Meso1 CAR T cells (membrane-distal region) in gastric cancer NSG mouse models and large ovarian tumors. A humanized version of YP218 (i.e., hYP218) has been generated and used to make an antibody-drug conjugate (ADC) called NAV-001-PNU that is highly effective against MUC16/CA125 HIO-positive tumor cell lines as well as several patient-derived xenografts (PDX). The humanized version of YP218 was also conjugated to a photosensitizing phthalocyanine dye, IRDye

700DX NHS ester. The IR700-hYP218 conjugate caused rapid cell death of MSLN-expressing A431/H9 cell lines in vitro and significant inhibition of tumor growth with improved survival in vivo (upon exposure to near-infrared light). BE0405 is the original rabbit IgG version of YP218 and not the humanized version.

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

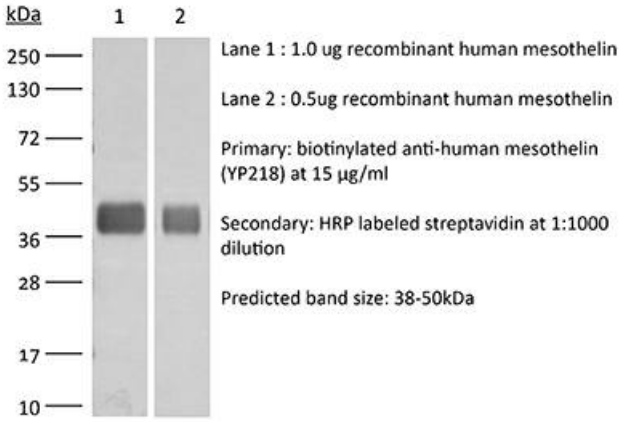
Since applications vary, each investigator should use the application references as a guide to help estimate the appropriate dose or concentration. The dose or concentration can be further optimized experimentally in a dose response or titration experiment.

Application References

For a complete list of references, visit https://bioxcell.com/be0405?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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