

PRODUCT INFORMATION



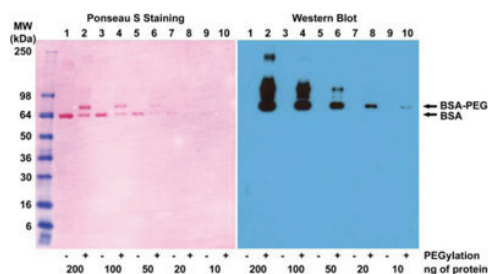
Polyethylene Glycol Rabbit Monoclonal Antibody (Clone RM105)

Item No. 32180

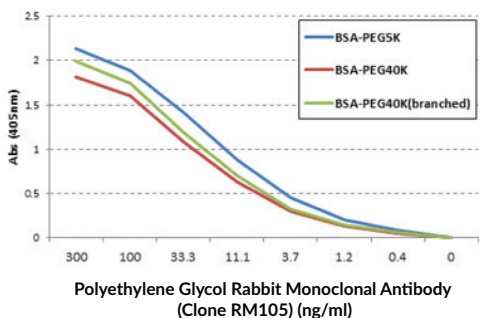
Overview and Properties

Contents: This vial contains 100 µg of protein A-affinity purified monoclonal antibody.
Synonym: PEG
Immunogen: KLH-PEG with terminal methoxy group
Cross Reactivity: (+) Methoxy-PEG
Species Reactivity: Species independent
Form: Liquid
Storage: -20°C (as supplied)
Stability: ≥1 year
Storage Buffer: PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Concentration: 1.0 mg/ml
Clone: RM105
Host: Rabbit
Isotype: IgG
Applications: ELISA, Immunohistochemistry (IHC), and Western blot (WB); the recommended starting concentration for ELISA is 0.01-0.3 µg/ml, 0.5-2 µg/ml for IHC, and 0.05-1 µg/ml for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

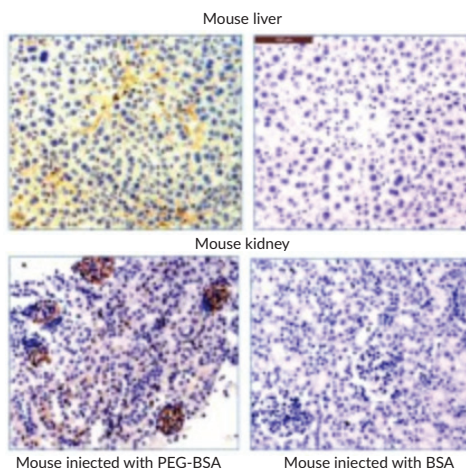
Images



WB of BSA and PEGylated BSA (mPEG 5 kDa) using Polyethylene Glycol Rabbit Monoclonal Antibody (Clone RM105) at a concentration of 0.1 µg/ml.



ELISA of three different PEGylated BSAs using Polyethylene Glycol Rabbit Monoclonal Antibody (Clone RM105), followed by an AP-conjugated goat anti-rabbit IgG.



Immunohistochemical staining of mouse liver and kidney using Polyethylene Glycol Rabbit Monoclonal Antibody (Clone RM105) at a concentration of 0.5 µg/ml. The mouse was injected with PEG-BSA or BSA for three hours before sampling.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

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Description

Polyethylene glycols (PEGs) are synthetic and hydrophilic polymers.^{1,2} They are linear or branched and contain a reactive end group, such as acrylate, methacrylate, dibenzocyclooctynol, or vinyl sulfonate, for covalent attachment to macromolecules or linkers. The opposite end group of PEGs is commonly a methyl group (methoxy PEG), however, hydroxy, amino, butoxy, and *tert*-butoxy end groups have also been used.¹ PEGs are non-toxic and are commonly used to prolong the *in vivo* circulation time of pharmaceutical agents.² Free PEGs are non-immunogenic but become immunogenic when conjugated to a drug delivery nanosystem (DDS) or a macromolecule.¹ Immunogenicity of PEGs varies based on polymer length and branching, end group composition, and chemical nature of the PEG acceptor structure. Cayman's Polyethylene Glycol Rabbit Monoclonal Antibody (Clone RM105) can be used for ELISA, immunohistochemistry (IHC), and Western blot (WB) applications. The antibody recognizes PEGs containing a methoxy end group.

References

1. Kozma, G.T., Shimizu, T., Ishida, T., *et al.* Anti-PEG antibodies: Properties, formation, testing and role in adverse immune reactions to PEGylated nano-biopharmaceuticals. *Adv. Drug Deliv. Rev.* **154-155**, 163-175 (2020).
2. Zhang, Z., Zhang, Y., Song, S., *et al.* Recent advances in the bioanalytical methods of polyethylene glycols and PEGylated pharmaceuticals. *J. Sep. Sci.* **43(9-10)**, 1978-1997 (2020).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
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[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM