PRODUCT INFORMATION

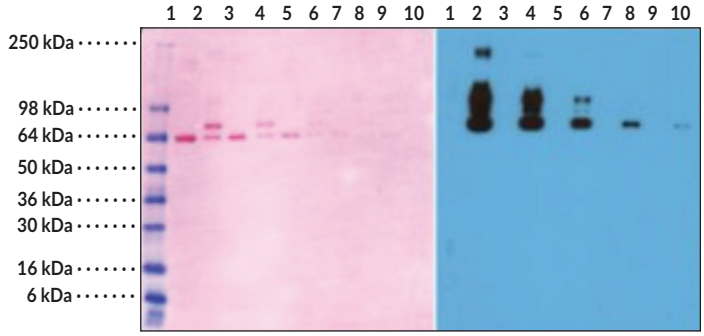
Polyethylene Glycol Rabbit Monoclonal Antibody - Biotinylated (Clone RM105)

Item No. 32381

Overview and Properties

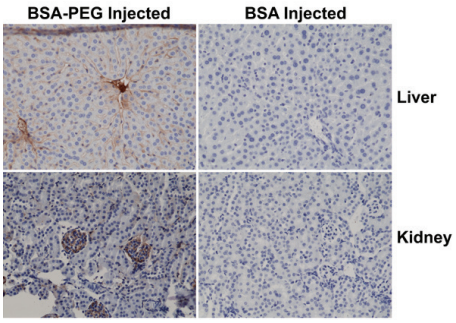
Contents:	This vial contains 50 µg of protein A-affinity purified monoclonal antibody.
Synonym:	PEG
Immunogen:	KLH-PEG with a terminal methoxy group
Cross Reactivity:	(+) Methoxy-PEG
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% 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 is 0.02-0.5 µg/ml for ELISA, 0.5-2 µg/ml for IHC, and 0.1-1 µg/ml for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

Images



Lane 1: BSA (200 ng)
Lane 2: PEGylated BSA (200 ng)
Lane 3: BSA (100 ng)
Lane 4: PEGylated BSA (100 ng)
Lane 5: BSA (50 ng)
Lane 6: PEGylated BSA (50 ng)
Lane 7: BSA (20 ng)
Lane 8: PEGylated BSA (20 ng)
Lane 9: BSA (10 ng)
Lane 10: PEGylated BSA (10 ng)

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



Immunohistochemical staining of mouse liver and kidney using 0.5 µg/ml of Polyethylene Glycol Rabbit Monoclonal Antibody - Biotinylated (Clone RM105), followed by an HRP conjugated streptavidin. The mouse was injected with PEG-BSA or BSA three hours before sampling.

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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 - Biotinylated (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).

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