

# PRODUCT INFORMATION



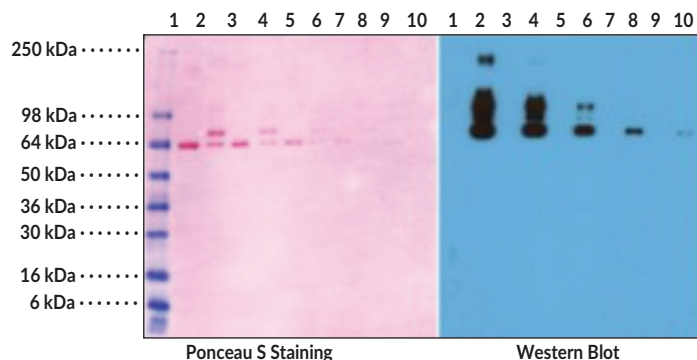
## Polyethylene Glycol Rabbit Monoclonal Antibody - Biotinylated (Clone RM105)

Item No. 32381

### Overview and Properties

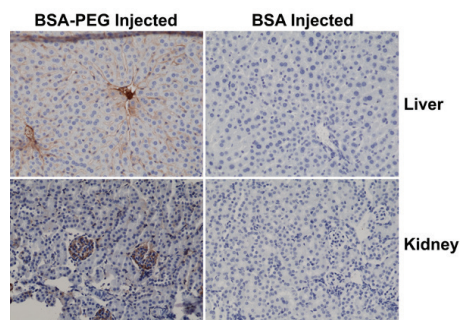
<b>Contents:</b>	This vial contains 50 µg of protein A-affinity purified monoclonal antibody.
<b>Synonym:</b>	PEG
<b>Immunogen:</b>	KLH-PEG with a terminal methoxy group
<b>Cross Reactivity:</b>	(+) Methoxy-PEG
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	≥1 year
<b>Storage Buffer:</b>	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
<b>Concentration:</b>	1.0 mg/ml
<b>Clone:</b>	RM105
<b>Host:</b>	Rabbit
<b>Isotype:</b>	IgG
<b>Applications:</b>	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.

**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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## Description

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Polyethylene glycols (PEGs) are synthetic and hydrophilic polymers.<sup>1,2</sup> 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.<sup>1</sup> PEGs are non-toxic and are commonly used to prolong the *in vivo* circulation time of pharmaceutical agents.<sup>2</sup> Free PEGs are non-immunogenic but become immunogenic when conjugated to a drug delivery nanosystem (DDS) or a macromolecule.<sup>1</sup> 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

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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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