THE™ PEG Antibody, mAb, Mouse

Cat. No.: A01795-100
Host: Mouse
Size: 100 µg
Immunogen: PEG conjugated to KLH
Ig Subclass: IgM
Clone: 5E10E9
Purification: Affinity chromatography
Conjugation: Unconjugated
Version: 10/24/2012

Description

Polyethylene glycol (PEG) is a polyether compound with many applications from industrial manufacturing to medicine. PEGylation technology is the covalent coupling of non-toxic, hydrophilic polyethylene glycol (PEG) to the drug. It is an FDA-approved method for the delivery of protein drugs for PEG modification can reduce the drug immunogenicity and antigenicity. PEGylated drug decelerates renal excretion, improves stability towards proteolysis and increases its half life in blood. Accurate and sensitive quantification of PEG conjugates is important for PEG conjugated product development and pharmaceutical study. Polyethylene glycol (PEG) antibody is a useful tool for the detection of PEGylated molecules.

GenScript THE™ PEG Antibody, mAb, Mouse is produced from the hybridoma resulting from fusion of Sp2/0 myeloma and lymphocytes obtained from mouse immunized with PEG conjugated to KLH.

Specificity

GenScript THE™ PEG Antibody, mAb, Mouse has high affinity for the PEG backbone. The antibody binds to the variety of PEG such as PEG40K, PEG20K, PEG5K, PEG12, PEGylated drugs and PEG conjugates.

Fusion Partner

Spleen cells were fused with SP2/0-Ag14 mouse myeloma cells.

Concentration

0.5 mg/ml, lyophilized with PBS, pH 7.4, containing 0.02% sodium azide.

Reconstitution

Reconstitute the lyophilized product with deionized water (or equivalent) to make antibody concentration of 0.5 mg/ml. For long-term storage, we suggest adding glycerol to 50% to reconstituted antibody.

Storage

GenScript THE™ PEG Antibody, mAb, Mouse should be stored lyophilized until use. It remains stable in lyophilized form if stored at -20°C or below. The reconstituted antibody can be stored for 2-3 weeks at 2-8°C or for up to 12 months at -20°C or below. Avoid repeated freezing and thawing cycles.

Note

Some reagents such as Tween-20, Triton X-100 and NP-40 interfere with the PEG antibody interaction due to structural similarity to PEG. Antibody solution should not contain such reagents in the assay of PEGylated molecules.

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Applications

Working concentrations for specific applications should be empirically determined by the investigator. The appropriate concentrations may be affected by secondary antibody affinity, antigen concentration, the sensitivity of the detection methods, temperature, the length of the incubations, and other factors. The suitability of this antibody for applications other than those listed below has not been determined.

ELISA Capturer: 5-10 µg/ml

ELISA Detector: 0.1-1.0 µg/ml

Competitive ELISA: customer optimized

Double Antigen Bridging ELISA: customer optimized

Western Blot: 0.1-1.0 µg/ml

Immunohistochemistry: 10-15 µg/ml

Example

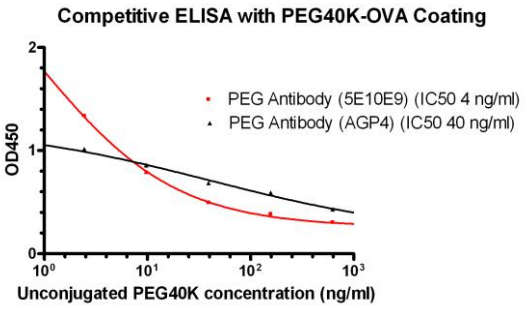

Fig 1. The half maximal inhibitory concentration (IC50) comparison of THE™ PEG Antibody, mAb, Mouse (Cat.No. A01795) and commercial Mouse Anti-PEG mAb (Clone AGP4) in competitive ELISA.

The test result showed GenScript PEG Antibody had lower IC50 than the commercial one.

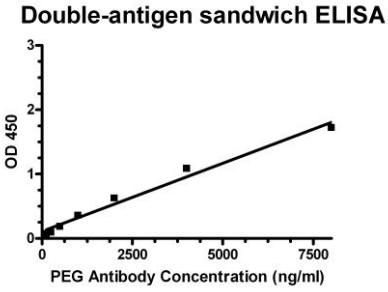

Fig 2. Double-antigen sandwich ELISA analysis of THE™ PEG Antibody, mAb, Mouse (Cat.No. A01795)

PEG Antibody was captured by PEG40K-OVA and detected by PEG20K-Biotin and Streptavidin-HRP conjugate.

The test result showed GenScript PEG Antibody was suitable for Bridging

ELISA application.

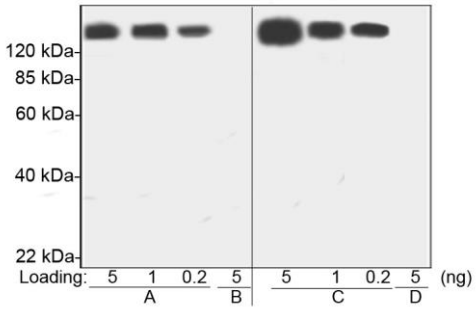

Fig 3. Sensitivity comparison of commercial Mouse Anti-PEG mAb (A,B: Clone AGP4, 0.2 μg/ml) with PEG Antibody, mAb, Mouse (C,D: GenScript, A01795, 0.2 μg/ml) by Western Blot.

A,B: PEGylated drug (Pegasys, Peginterferon Alfa 2A)

C,D: Interferon Alfa 2A protein

The test result showed GenScript PEG Antibody had better sensitivity than the commercial one.

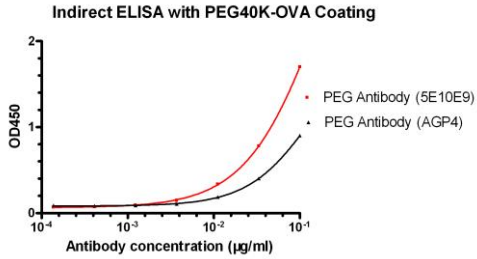

Fig 4. Sensitivity comparison of THE™ PEG Antibody, mAb, Mouse (Cat.No. A01795) and commercial Mouse Anti-PEG mAb (Clone AGP4) by indirect ELISA.

The test result showed GenScript PEG Antibody had better reactivity to PEG40K-OVA than the commercial one.

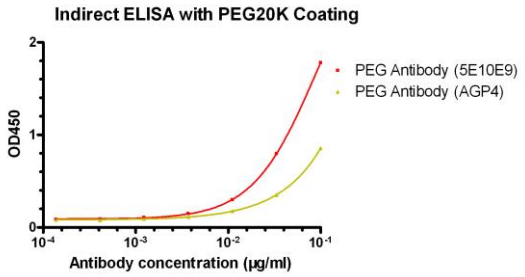

Fig 5. Sensitivity comparison of THE™ PEG Antibody, mAb, Mouse (Cat.No. A01795) and commercial Mouse Anti-PEG mAb (Clone AGP4) by indirect ELISA.

The test result showed GenScript PEG Antibody had better reactivity to PEG20K than the commercial one.

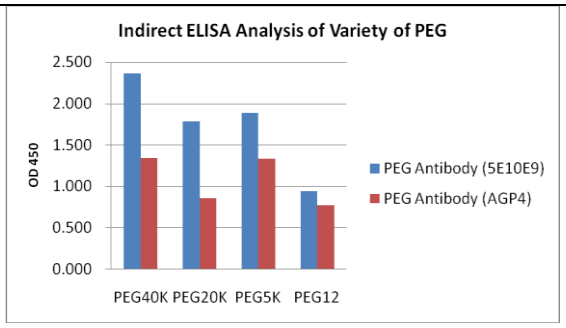

Fig 6. Sensitivity comparison of THE™ PEG Antibody, mAb, Mouse (Cat.No. A01795) and commercial Mouse Anti-PEG mAb (Clone AGP4) by indirect ELISA.

The test result showed GenScript PEG Antibody had better reactivity to PEG40K, PEG20K, PEG5K and PEG12 than the commercial one.

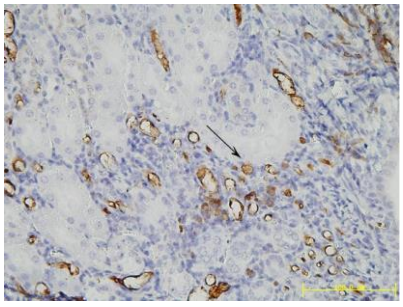

Fig 7. Immunohistochemistry analysis of mouse kidney tissue slide (Paraffin embedded) using THE™ PEG Antibody, mAb, Mouse (A01795, 10 μg/ml) after mice were injected with BSA-PEG.

The test result showed GenScript PEG Antibody was suitable for IHC application.

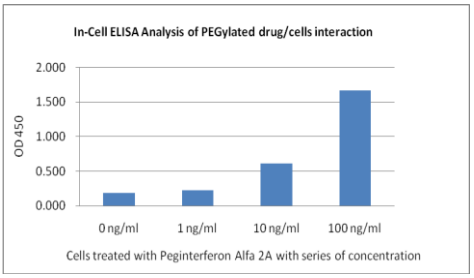

Fig 8. In-Cell ELISA analysis of PEGylated drug/HepG2 interaction using THE™ PEG Antibody, mAb, Mouse (A01795, 1 µg/ml) after HepG2 cells were treated with PEGylated drug (Pegasys, Peginterferon Alfa 2A) at different conconcentration.

The test result showed GenScript PEG Antibody was suitable for analysis of PEGylated drug/cell interaction.