

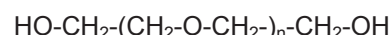
## Polyethylene Glycol Matched Antibody Pair

Polyethylene Glycol (PEG) is a long chain polymer that has been approved by the Food and Drug Administration for human intravenous, oral and dermal applications. Covalent attachment of PEG (PEGylation) to proteins can reduce their immunogenicity, minimize proteolytic cleavage and increase their serum half-life. PEG has also been attached to small molecules and liposomes for more selective delivery. PEG-modification of superparamagnetic iron oxide and quantum dots can improve their biocompatibility and reduce non-specific uptake.

### Characteristics of PEG

- Water soluble, nontoxic, biocompatible
- Covalently conjugated to proteins, small molecules, and particles
- Decreased immunogenicity
- Minimized proteolytic cleavage
- Increased bioavailability

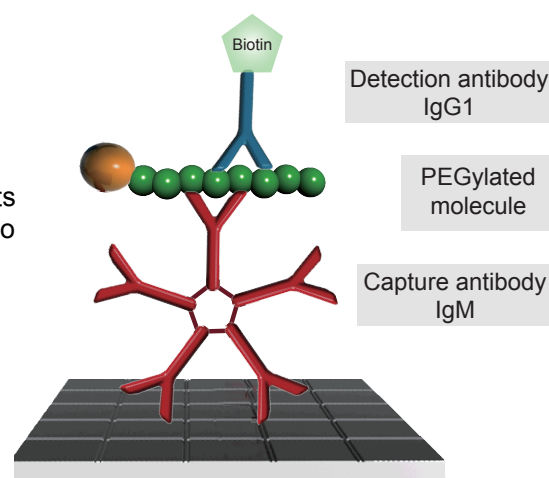
PEG formula



### PEG Matched Antibody Pair

- Capture antibody: mouse monoclonal anti-PEG, IgM
- Detection antibody: mouse monoclonal anti-PEG, IgG1

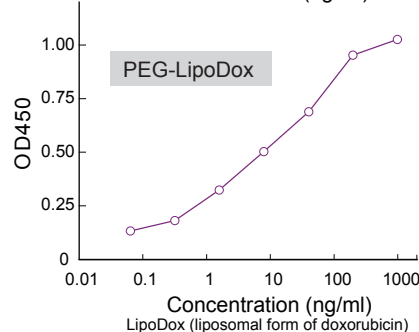
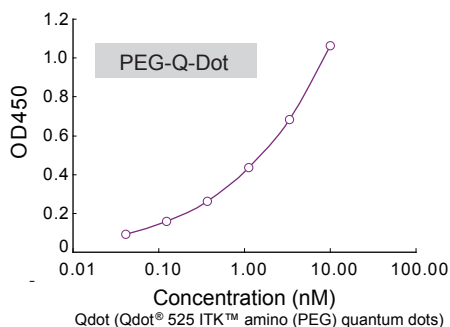
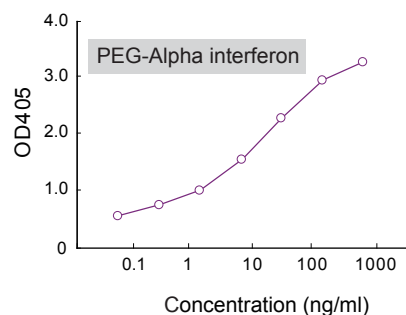
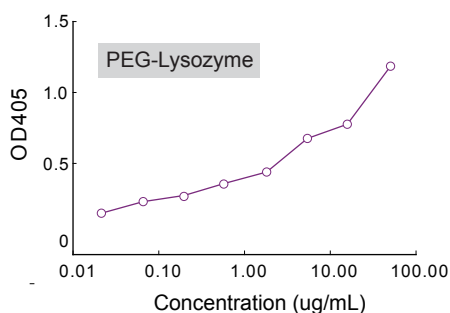
These anti-PEG antibodies bind to the repeating subunits of the polyethylene glycol polymer and can be employed to detect and quantify PEGylated compounds.



### Applications

- Immunoblot
- Immunoprecipitation
- Sandwich ELISA
- Flow Cytometry

### Colorimetric Detection



### Publications

- TL Cheng, SR Roffler *et al.* **Monoclonal antibody-based quantitation of poly(ethylene glycol)-derivatized proteins, liposomes, and nanoparticles** *Bioconj. Chem.* 16:1225-31, 2005
- NM Tsai, TL Cheng and SR Roffler **Sensitive quantitation of poly(ethylene glycol)-modified proteins** *Biotechniques* 30: 396-402, 2001