

Anti-Oxidized phospholipid [E06] Standard Size Ab02746-15.0

This antibody does not have a J-chain and therefore presents as a hexamer, rather than a pentamer.

Isotype and Format: Human IgM, Kappa

Clone Number: E06

Alternative Name(s) of Target: OxPL; OxLDL; CuOx-LDL; copper-oxidized low-density lipoproteins; E06

UniProt Accession Number of Target Protein:

Published Application(s): functional assay, RIA, WB, ELISA, FC, IF, IHC

Published Species Reactivity: Rabbit, Human, Mouse

Immunogen: The original mouse antibody was raised from apoE-deficient mice without any external immunogens. They were fed a high fat diet containing 12.8% milk fat and 0.15% cholesterol for 7 months. Such dietary intervention induces extensive aortic atherosclerosis, and is accompanied by the formation of high titers of E0 antibodies to MDA-lysine.

Specificity: This antibody is specific for oxidized lipoproteins.

Application Notes: To determine the antibody's binding affinity to native or modified human LDL, a radioimmunoassay was conducted using the mouse version of this antibody. Immunocytochemistry was performed on atherosclerotic lesions of LDL receptor-deficient rabbits, balloon-catheterized, cholesterol-fed New Zealand white rabbits, and human brain arteries using the mouse version of this antibody (Palinski et al., 1996; PMID: 8698873). The mouse version of this antibody was characterized through various experiments and assays. An antibody absorption experiment was conducted on increasing concentrations of native PAPC, OxPAPC, or microemulsions made from lipids extracted from native LDL or CuOx-LDL. Additionally, it was used in an ELISA performed on antigens in PBS. In a Western blot assay, the alkaline phosphatase-labeled goat anti-mouse IgM version of this antibody was utilized to detect CuOx-LDL and native LDL. A flow cytometric experiment was performed on resident peritoneal macrophages isolated from female Swiss-Webster mice using the original mouse version of this antibody. Furthermore, a binding and degradation assay was carried out on mouse peritoneal macrophages using the mouse version of this antibody (Hörkkö et al., 1999; PMID: 9884341). This antibody was also used to measure the extent of LDL oxidation induced by copper through a luminescence signal generated from streptavidin. The streptavidin was conjugated to Aqualite bound to biotinylated antibodies (Sundell et al., 2003; PMID: 12626663). The binding profile of the single-chain variable fragment (scFv) version of this antibody was evaluated through an ELISA performed on various phosphocholine epitopes. These included Cu-OxLDL, phosphocholine-KLH, PC-BSA, POVPC-BSA, and capsular polysaccharide (C-PS) of *Streptococcus pneumoniae*. The scFv version's

ability to bind to apoptotic cells was tested using flow cytometry on thymocytes collected from C57BL/6 mice induced to undergo apoptosis (Que et al., 2018; PMID: 29875409). In another study, the antibody E06 was employed in immunohistochemistry to detect elevated expression of OxPL in irradiated lungs (Cui et al., 2021; PMID: 34546215).

Antibody First Published in: Palinski et al. Cloning of monoclonal autoantibodies to epitopes of oxidized lipoproteins from apolipoprotein E-deficient mice. Demonstration of epitopes of oxidized low density lipoprotein in human plasma J Clin Invest. 1996 Aug 1;98(3):800-14. [PMID:8698873](#)

Note on publication: The original publication discusses the cloning of monoclonal autoantibodies to epitopes of oxidized lipoproteins from apolipoprotein E-deficient mice ("E0 antibodies"), demonstrating the occurrence of these epitopes in human plasma and atherosclerotic lesions, and highlighting the immunological response to various epitopes of oxidized lipoproteins *in vivo*.

Product Form

Size: 50 µg Purified antibody.

Purification: Affinity Purified using a recombinant lectin column

Supplied In: PBS with 0.02% Proclin 300.

Storage Recommendation: Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.