

CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET

Product name	Oxidized phospholipids, Mouse, clone 10C12		
Catalog number	HM1142-100UG		
Lot number	-	Expiry date	-
Volume	1 ml	Amount	100 µg
Formulation	0.2 µm filtered in PBS+0.1%BSA	Concentration	100 µg/ml
Host Species	Mouse IgM, kappa	Conjugate	None
Endotoxin	<24 EU/mg	Purification	Specialized IgM column
Storage	4°C		

Application notes

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #		1			1			
Yes		•			•	•		•
No								
N.D.	•		•	•			•	

N.D. = Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

- FS: antibody 10C12 demonstrated potent OxPL neutralizing activity in vitro and the ability to inhibit macrophage accumulation within arteries of Apoe^{-/-} mice fed a Western diet for 4 weeks. 10C12 treatment caused a 40% decrease in lipid accumulation within aortas of secreted IgM deficient, sigM^{-/-}Apoe^{-/-}, mice fed a low-fat diet, when the antibody was administered between 32-40 weeks of age. (Ref.1).
- IHC-P: Staining was done on 5 µm crosssections of human autopsy samples using 10C12 (Ref.1).

General Information

Description	Oxidized phospholipids (OxPL), such as oxidized PAPC (1-palmitoyl-2-arachidonoyl-sn-glycero-3-phosphocholine) and its derivatives (POVPC and PGPC) are the biologically active components of minimally oxidized LDL. Both fragmented and full-length oxygenated molecules can regulate immune reactions including the activation of inflammation. Pro-inflammatory effects of OxPL include stimulation of endothelial cells to bind monocytes and induction of tissue clotting factor, IL-8, MCP-1, G-CSF and other mediators of atherothrombosis. Anti-inflammatory effects of OxPL are mediated by induction of protective enzymes such as heme oxygenase-1 as well as suppression of innate immune responses to bacterial lipopolysaccharide (LPS) due to inhibition of LPS recognition by LPS-binding protein (LBP) and CD14. It is well-known that oxidized phospholipids play, as immune modulators, an important role in cardiovascular diseases such as atherosclerosis. However, these lipid oxidation products have been suggested to also play a role in many other disease settings. Lipid oxidation products accumulate in inflamed and oxidative damaged tissue, where they are derived from oxidative modification of lipoproteins, but also from membranes of cells undergoing apoptosis. Increased oxidative stress as well as decreased clearance of apoptotic cells has been implied to contribute to accumulation of OxPL in chronically inflamed tissues. It is therefore suggested that OxPLs are also associated with other diseases associated with dyslipidemia such as diabetes, metabolic syndrome, renal insufficiency and fatty liver disease. In addition, in organs which are constantly exposed to oxidative stress, including lung, skin, and eyes, increased levels of OxPL are suggested to contribute to inflammatory conditions. In theory, treatment with OxPL neutralizing antibodies can be used to prevent or reverse these diseases. The anti-OxPL antibody HM1142 is able to recognize the OxPL derivatives POVPC and PGPC.
Immunogen	POVPC/PGPC (OxPL)
Cross reactivity	Human: Yes
References	1. Cherepanova, O et al; Novel Autoimmune IgM Antibody Attenuates Atherosclerosis in IgM Deficient Low-Fat Diet-Fed, but Not Western Diet-Fed Apoe ^{-/-} Mice. Arterioscler Thromb Vasc Biol. 2019, 39
Storage&stability	Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

Precautions

For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC
Brenda Teunissen

Date
24/09/2021

Do you have any questions or comments regarding this product? Please contact us via support@hycultbiotech.com.