

## Datasheet: MCA5639EL

**BATCH NUMBER 155283**

<b>Description:</b>	MOUSE ANTI HUMAN APOLIPOPROTEIN E:Low Endotoxin
<b>Specificity:</b>	APOLIPOPROTEIN E
<b>Format:</b>	Low Endotoxin
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	WUE-4
<b>Isotype:</b>	IgG1
<b>Quantity:</b>	0.5 mg

## Product Details

### Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit [www.bio-rad-antibodies.com/protocols](http://www.bio-rad-antibodies.com/protocols).

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA	▪			1/100 - 1/1000
Immunoprecipitation			▪	
Western Blotting	▪			
Functional Assays	▪			

Where this product has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the product for use in their own system using appropriate negative/positive controls.

<b>Target Species</b>	Human
<b>Species Cross Reactivity</b>	<p>Reacts with: Mouse</p> <p>Does not react with: Sea Lion, Harbour seal</p> <p><b>N.B.</b> Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.</p>
<b>Product Form</b>	Purified IgG - liquid

<b>Preparation</b>	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
<b>Buffer Solution</b>	Phosphate buffered saline
<b>Preservative Stabilisers</b>	None present
<b>Carrier Free</b>	Yes
<b>Endotoxin Level</b>	< 0.01 EU/ug
<b>Approx. Protein Concentrations</b>	IgG concentration 1.0 mg/ml
<b>Immunogen</b>	Purified ApoHDL fraction.
<b>External Database Links</b>	<p><b>UniProt:</b>  <a href="#">P02649</a>    <a href="#">Related reagents</a></p> <p><b>Entrez Gene:</b>  <a href="#">348</a>    APOE    <a href="#">Related reagents</a></p>
<b>RRID</b>	AB_10843454
<b>Fusion Partners</b>	Spleen cells from immunised Balb/c mice were fused with cells of the Sp2/O-Ag14 mouse myeloma cell line.
<b>Specificity</b>	<p><b>Mouse anti Human Apolipoprotein E antibody, clone WUE-4</b> recognizes an epitope within amino acids 140-160 of human apolipoprotein E (Apo-E), a major component of very low-density lipoproteins (VLDLs). Apo-E is the principle apolipoprotein in the central nervous system, and is secreted by most organs into the plasma, playing a vital role in the binding, internalization and catabolism of triglyceride-rich lipoprotein constituents.</p> <p>Apo-E acts as a ligand for both the specific apo-E receptor (chylomicron remnant) of hepatic tissues, and the apoB,E (LDL) receptor. Three isoforms of Apo-E have been identified, ApoE2, E3 and E4, and have been linked with various disorders. ApoE2 has been shown to bind LPL receptors with low affinity, resulting in increased plasma cholesterol and triglyceride levels, and thereby an increased risk in cardiovascular disorders. ApoE4 is a high risk factor for Alzheimers disease (<a href="#">Sanan et al. 1994</a>), and in particular late onset Alzheimer disease 2 (AD2), whilst ApoE3 is the most common isoform, and considered the normal/natural Apo-E genotype.</p> <p>Mouse anti Human Apolipoprotein E antibody, clone WUE-4 has been shown to inhibit Apo-E mediated binding of lipoproteins to the apoB,E cell receptor (<a href="#">Krul et al. 1998</a>).</p>
<b>Western Blotting</b>	MCA5639EL detects a major band of approximately 34-36kDa in human liver cell lysates.

## References

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2. Fagan, A.M. *et al.* (2004) ApoAI deficiency results in marked reductions in plasma cholesterol but no alterations in amyloid-beta pathology in a mouse model of Alzheimer's disease-like cerebral amyloidosis. [Am J Pathol. 165: 1413-22.](#)
3. Fryer, J.D. *et al.* (2005) The low density lipoprotein receptor regulates the level of central nervous system human and murine apolipoprotein E but does not modify amyloid plaque pathology in PDAPP mice. [J Biol Chem. 280 \(27\): 25754-9.](#)
4. Wahrle, S.E. *et al.* (2007) Apolipoprotein E levels in cerebrospinal fluid and the effects of ABCA1 polymorphisms. [Mol Neurodegener. 2: 7.](#)
5. Hirsch-Reinshagen, V. *et al.* (2009) LCAT synthesized by primary astrocytes esterifies cholesterol on glia-derived lipoproteins. [J Lipid Res. 50: 885-93.](#)
6. Fan, J. *et al.* (2011) An ABCA1-independent pathway for recycling a poorly lipidated 8.1 nm apolipoprotein E particle from glia. [J Lipid Res. 52: 1605-16.](#)
7. Youmans, K.L. *et al.* (2011) Amyloid- $\beta$ 42 alters apolipoprotein E solubility in brains of mice with five familial AD mutations. [J Neurosci Methods. 196: 51-9.](#)
8. Kim, J. *et al.* (2012) Anti-apoE immunotherapy inhibits amyloid accumulation in a transgenic mouse model of A $\beta$  amyloidosis. [J Exp Med. 209: 2149-56.](#)
9. Wildsmith KR *et al.* (2012) *In vivo* human apolipoprotein E isoform fractional turnover rates in the CNS. [PLoS One. 7 \(6\): e38013.](#)
10. Jiang, J. *et al.* (2012) Hepatitis C virus attachment mediated by apolipoprotein E binding to cell surface heparan sulfate. [J Virol. 86: 7256-67.](#)
11. Lee, C.Y. *et al.* (2012) Apolipoprotein E promotes  $\beta$ -amyloid trafficking and degradation by modulating microglial cholesterol levels. [J Biol Chem. 287: 2032-44.](#)
12. Jiang, J. *et al.* (2013) Apolipoprotein e mediates attachment of clinical hepatitis C virus to hepatocytes by binding to cell surface heparan sulfate proteoglycan receptors. [PLoS One. 8: e67982.](#)
13. Fu, Y. *et al.* (2016) Apolipoprotein E lipoprotein particles inhibit amyloid- $\beta$  uptake through cell surface heparan sulphate proteoglycan. [Mol Neurodegener. 11 \(1\): 37.](#)

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<b>Storage</b>	Store at -20°C only. Storage in frost-free freezers is not recommended. This product should be stored undiluted. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.
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<b>Guarantee</b>	12 months from date of despatch
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<b>Health And Safety Information</b>	Material Safety Datasheet documentation #10162 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA5639EL">https://www.bio-rad-antibodies.com/SDS/MCA5639EL</a> 10162
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<b>Regulatory</b>	For research purposes only
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## Related Products

### Recommended Secondary Antibodies

Goat Anti Mouse IgG (STAR77...) [HRP](#)  
Rabbit Anti Mouse IgG (STAR12...) [RPE](#)  
Goat Anti Mouse IgG (STAR70...) [FITC](#)  
Goat Anti Mouse IgG IgA IgM (STAR87...) [Alk. Phos.](#), [HRP](#)  
Goat Anti Mouse IgG (STAR76...) [RPE](#)  
Goat Anti Mouse IgG (Fc) (STAR120...) [FITC](#), [HRP](#)  
Rabbit Anti Mouse IgG (STAR13...) [HRP](#)  
Rabbit Anti Mouse IgG (STAR9...) [FITC](#)  
Goat Anti Mouse IgG (H/L) (STAR117...) [Alk. Phos.](#), [DyLight®488](#), [DyLight®550](#),  
[DyLight®650](#), [DyLight®680](#), [DyLight®800](#),  
[FITC](#), [HRP](#)

## Recommended Negative Controls

[MOUSE IgG1 NEGATIVE CONTROL:Low Endotoxin \(MCA928EL\)](#)

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://bio-rad-antibodies.com/datasheets)

'M373730:200929'

Printed on 18 Jan 2024

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