Datasheet: MCA4739D680

BATCH NUMBER 166332

Description:	MOUSE ANTI RABBIT GAPDH:DyLight®680
Specificity:	GAPDH
Other names:	GLYCERALDEHYDE-3-PHOSPHATE DEHYDROGENASE
Format:	DyLight®680
Product Type:	Monoclonal Antibody
Clone:	6C5
Isotype:	IgG1
Quantity:	0.1 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.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry			▪	
Immunohistology - Frozen			▪	
Immunohistology - Paraffin			▪	
ELISA			▪	
Immunoprecipitation			▪	
Western Blotting	▪			1/1000 - 1/2500

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.

Target Species

Rabbit

Species Cross Reactivity

Reacts with: Human, Pig, Dog, Cat, Rat, Mouse, Xenopus, Tube-nosed Bat, Chicken, Sheep, African green monkey , Crucian Carp
Based on sequence similarity, is expected to react with:Vertebrates
N.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.

Product Form

Purified IgG conjugated to DyLight®680 - liquid

Max Ex/Em	**Fluorophore**	**Excitation Max (nm)**	**Emission Max (nm)**
	Dylight®680	692	712

Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative Stabilisers	0.09% Sodium Azide (NaN_3)
Approx. Protein Concentrations	IgG concentration 1.0mg/ml
Immunogen	Rabbit muscle GAPDH.

External Database Links

UniProt:

P46406	Related reagents
P04406	Related reagents
P04797	Related reagents
P16858	Related reagents
P00355	Related reagents

Entrez Gene:

100009074	GAPDH	Related reagents
2597	GAPDH	Related reagents
396823	GAPDH	Related reagents
14433	Gapdh	Related reagents
24383	Gapdh	Related reagents

Synonyms	Gapd, GAPD
RRID	AB_10673953
Fusion Partners	Spleen cells from immunised Balb/c mice were fused with cells of the Sp2/0 myeloma cell line.

Specificity

Mouse anti Rabbit GAPDH antibody, clone 6C5 recognizes glyceraldehyde-3-phosphate dehydrogenase (GAPDH), a ~36 kDa multifunctional protein whose main function is to catalyse the reversible oxidative phosphorylation of glyceraldehyde-3-phosphate, in conjunction with inorganic phosphate and nicotinamide adenine dinucleotide (NAD). This reaction is an important energy yielding step in carbohydrate metabolism.

GAPDH has also been shown to translocate to the nucleus under a variety of stressors, most of which are associated with oxidative stress, whereby it mediates cell death. A further report has shown that GAPDH binds to several proteins that are responsible for

	neurodegenerative diseases, such as amyloid precursor protein and Huntingtin (Hara *et al.* 2006).
Western Blotting	MCA4739D680 is suitable for use as a loading control
References	1. Koetzler, R. *et al.* (2009) Nitric oxide inhibits IFN regulatory factor 1 and nuclear factor-kappaB pathways in rhinovirus-infected epithelial cells. J Allergy Clin Immunol. 124: 551-7. 2. Latasa, M.U. *et al.* (2010) Oral methylthioadenosine administration attenuates fibrosis and chronic liver disease progression in Mdr2-/- mice. PLoS One. 5: e15690. 3. Zschemisch, N.H. *et al.* (2012) Zinc-finger nuclease mediated disruption of Rag1 in the LEW/Ztm rat. BMC Immunol. 13: 60. 4. Zizza, P. *et al.* (2012) Phospholipase A2IVα regulates phagocytosis independent of its enzymatic activity. J Biol Chem. 287: 16849-59. 5. Haller, S. *et al.* (2012) Expression profiles of metabolic enzymes and drug transporters in the liver and along the intestine of beagle dogs. Drug Metab Dispos. 40 (8): 1603-10. 6. Agarwal, P. *et al.* (2013) Tumor suppressor gene p16/INK4A/CDKN2A-dependent regulation into and out of the cell cycle in a spontaneous canine model of breast cancer. J Cell Biochem. 114 (6): 1355-63. 7. Beaudin, S. & Welsh, J. (2016) 1,25-Dihydroxyvitamin D induces the glutamate transporter SLC1A1 and alters glutamate handling in non-transformed mammary cells. Mol Cell Endocrinol. 424: 34-41. 8. Suzuki, K. *et al.* (2016) Human Host Defense Cathelicidin Peptide LL-37 Enhances the Lipopolysaccharide Uptake by Liver Sinusoidal Endothelial Cells without Cell Activation. J Immunol. 196 (3): 1338-47. 9. Hao, F. *et al.* (2017) Inhibition of Caspase-8 does not protect from alcohol-induced liver apoptosis but alleviates alcoholic hepatic steatosis in mice. Cell Death Dis. 8 (10): e3152. 10. Wang, S. *et al.* (2019) Tumor necrosis factor-inducible gene 6 reprograms hepatic stellate cells into stem-like cells, which ameliorates liver damage in mouse. Biomaterials. 219: 119375. 11. Chen, C. *et al.* (2021) Activation of the Unfolded Protein Response (UPR) Is Associated with Cholangiocellular Injury, Fibrosis and Carcinogenesis in an Experimental Model of Fibropolycystic Liver Disease Cancers. 14 (1): 78. 12. Hihara, F. *et al.* (2022) *In Vitro.* Tumor Cell-Binding Assay to Select High-Binding Antibody and Predict Therapy Response for Personalized ^{64}Cu-Intraperitoneal Radioimmunotherapy against Peritoneal Dissemination of Pancreatic Cancer: A Feasibility Study. Int J Mol Sci. 23 (10): 5807. 13. Vucur, M. *et al.* (2023) Sublethal necroptosis signaling promotes inflammation and liver cancer. Immunity. 56 (7): 1578-95.e8. 14. Kim, J. *et al.* (2023) Targeted Deletion of Thymosin Beta 4 in Hepatic Stellate Cells Ameliorates Liver Fibrosis in a Transgenic Mouse Model. Cells. 12 (12): 1658. 15. Paluschinski, M. *et al.* (2023) Uncovering Novel Roles of miR-122 in the Pathophysiology of the Liver: Potential Interaction with NRF1 and E2F4 Signaling. Cancers (Basel). 15 (16): 4129. 16. Chen, C. *et al.* (2021) Platelet glycoprotein VI-dependent thrombus stabilization is essential for the intraportal engraftment of pancreatic islets. Am J Transplant. 21 (6): 2079-89.

Storage	This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C. Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.
Guarantee	12 months from date of despatch
Acknowledgements	DyLight® is a trademark of Thermo Fisher Scientific Inc. and its subsidiaries.
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA4739D680 10040
Regulatory	For research purposes only

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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

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