Datasheet: MCA1360G

BATCH NUMBER 160689

Description:	MOUSE ANTI V5-TAG
Specificity:	V5-TAG
Other names:	PK-TAG
Format:	Purified
Product Type:	Monoclonal Antibody
Clone:	SV5-Pk1
Isotype:	IgG2a
Quantity:	2 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	▪			1/1000 - 1/5000
Immunoprecipitation	▪			
Western Blotting	▪			1/1000 - 1/5000
Immunofluorescence	▪			
Radioimmunoassays	▪			

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

Target Species	Viral
Product Form	Purified IgG - liquid
Preparation	Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant
Buffer Solution	Phosphate buffered saline
Preservative	0.09% Sodium Azide (NaN_3)

Stabilisers	
Carrier Free	Yes
Approx. Protein Concentrations	IgG concentration 1 mg/ml
Immunogen	Paramyxovirus Simian-Virus 5 (SV5)
External Database Links	**UniProt:** P11207 Related reagents
RRID	AB_1172162
Fusion Partners	Spleen cells from immunised BALB/c mice were fused with cells of the SP2/0 Ag14 myeloma cell line.
Specificity	**Mouse anti V5-Tag, clone SV5-Pk1** recognizes the sequence, IPNPLLGLD, present on the P/V proteins of the paramyxovirus, SV5 (Dunn *et al.*1999). Clone SV5-Pk1 is used to detect recombinant proteins, some of which include transmembrane and secreted proteins, that have labeled with tags containing this sequence (Randall *et al.*1993 and Zhao *et al.* 2005).
References	1. Southern, J.A. *et al.* (1991) Identification of an epitope on the P and V proteins of simian virus 5 that distinguishes between two isolates with different biological characteristics. J Gen Virol. 72 (Pt 7): 1551-7. 2. Orime, K. *et al.* (2013) Trefoil Factor 2 Promotes Cell Proliferation in Pancreatic β-Cells through CXCR-4-Mediated ERK1/2 Phosphorylation. Endocrinology. 154: 54-64. 3. Randall, R.E. *et al.* (1993) Two-tag purification of recombinant proteins for the construction of solid matrix-antibody-antigen (SMAA) complexes as vaccines. Vaccine. 11 (12): 1247-52. 4. Randall, R.E. *et al.* (1994) Purification of antibody-antigen complexes containing recombinant SIV proteins: comparison of antigen and antibody-antigen complexes for immune priming. Vaccine. 12 (4): 351-8. 5. Hanke, T. *et al.* (1995) Attachment of an oligopeptide epitope to the C-terminus of recombinant SIV gp160 facilitates the construction of SMAA complexes while preserving CD4 binding. J Virol Methods. 53 (1): 149-56. 6. Jaffray, E. *et al.* (1995) Domain organization of I kappa B alpha and sites of interaction with NF-kappa B p65. Mol Cell Biol. 15 (4): 2166-72. 7. Rodriguez, M.S. *et al.* (1995) Inducible degradation of I kappa B alpha in vitro and in vivo requires the acidic C-terminal domain of the protein. Mol Cell Biol. 15 (5): 2413-9. 8. Chung, J.S. *et al.* (2009) The DC-HIL/syndecan-4 pathway inhibits human allogeneic T-cell responses. Eur J Immunol. 39: 965-74. 9. Hirst, K. *et al.* (1994) The transcription factor, the Cdk, its cyclin and their regulator: directing the transcriptional response to a nutritional signal. EMBO J. 13 (22): 5410-20. 10. Dunn, C. *et al.* (1999) Fine mapping of the binding sites of monoclonal antibodies raised against the Pk tag. J Immunol Methods. 224 (1-2): 141-50.

11. Lou, J.J. *et al.* (2010) Inhibition of hypoxia-inducible factor-1alpha (HIF-1alpha) protein synthesis by DNA damage inducing agents. PLoS One. 5: e10522.
12. Sanchez Garcia, J. *et al.* (2004) The C-terminal zinc finger of the catalytic subunit of DNA polymerase delta is responsible for direct interaction with the B-subunit. Nucleic Acids Res. 32 (10): 3005-16.
13. Herskowitz, J.H. *et al.* (2011) Rho kinase II phosphorylation of the lipoprotein receptor LR11/SORLA alters amyloid-beta production. J Biol Chem. 286 (8): 6117-27.
14. Liebau, M.C. *et al.* (2011) Nephrocystin-4 regulates Pyk2-induced tyrosine phosphorylation of Nephrocystin-1 to control targeting to monocilia. J Biol Chem. 286: 14237-45.
15. Björk, J.K. *et al.* (2010) miR-18, a member of Oncomir-1, targets heat shock transcription factor 2 in spermatogenesis. Development. 137(19):3177-84.
16. Boggio, R. *et al.* (2007) Targeting SUMO E1 to ubiquitin ligases: a viral strategy to counteract sumoylation. J Biol Chem. 282: 15376-82.
17. Gallazzini, M. *et al.* (2011) High NaCl-induced activation of CDK5 increases phosphorylation of the osmoprotective transcription factor TonEBP/OREBP at threonine 135, which contributes to its rapid nuclear localization. Mol Biol Cell. 22: 703-14.
18. Hadler, K.S. *et al.* (2008) Identification of a non-purple tartrate-resistant acid phosphatase: an evolutionary link to Ser/Thr protein phosphatases? BMC Res Notes. 1: 78.
19. Zhao, A. *et al* (2011) Rapid isolation of high-affinity human antibodies against the tumor vascular marker Endosialin/TEM1, using a paired yeast-display/secretory scFv library platform. J Immunol Methods. 363: 221-32.
20. Patino, G.A. *et al.* (2011) Voltage-Gated Na+ Channel {beta}1B: A Secreted Cell Adhesion Molecule Involved in Human Epilepsy. J Neurosci. 31: 14577-91.
21. Gatherer, D. *et al.* (2011) High-resolution human cytomegalovirus transcriptome. Proc Natl Acad Sci U S A.108: 19755-60.
22. Mahuzier, A. *et al.* (2012) Dishevelled stabilization by the ciliopathy protein Rpgrip1l is essential for planar cell polarity. J Cell Biol. 198: 927-40.
23. Zhao, C. *et al.* (2005) Human ISG15 conjugation targets both IFN-induced and constitutively expressed proteins functioning in diverse cellular pathways. Proc Natl Acad Sci U S A. 102:10200-5
24. Singh, A. *et al.* (2014) Trypanosome MKT1 and the RNA-binding protein ZC3H11: interactions and potential roles in post-transcriptional regulatory networks. Nucleic Acids Res. 42: 4652-68.
25. Mui, M.Z. *et al.* (2015) The Human Adenovirus Type 5 E4orf4 Protein Targets Two Phosphatase Regulators of the Hippo Signaling Pathway. J Virol. 89 (17): 8855-70.
26. Shi X *et al.* (2016) Bunyamwera orthobunyavirus glycoprotein precursor is processed by cellular signal peptidase and signal peptide peptidase. Proc Natl Acad Sci U S A. 113 (31): 8825-30.
27. Ng, M.Y. *et al.* (2017) Activation of MAPK/ERK signaling by *Burkholderia pseudomallei* cycle inhibiting factor (Cif). PLoS One. 12 (2): e0171464.
28. Voskarides, K. *et al.* (2017) A functional variant in NEPH3 gene confers high risk of renal failure in primary hematuric glomerulopathies. Evidence for predisposition to microalbuminuria in the general population. PLoS One. 12 (3): e0174274.
29. Malik, S. *et al.* (2015) Adrenocorticotropic Hormone (ACTH) Responses Require Actions of the Melanocortin-2 Receptor Accessory Protein on the Extracellular Surface of

the Plasma Membrane. J Biol Chem. 290 (46): 27972-85.
30. Carrocci, T.J. *et al.* (2017) SF3b1 mutations associated with myelodysplastic syndromes alter the fidelity of branchsite selection in yeast. Nucleic Acids Res. 45 (8): 4837-4852.
31. Kerwin, S.K. *et al.* (2018) Regulated Alternative Splicing of *Drosophila Dscam2* Is Necessary for Attaining the Appropriate Number of Photoreceptor Synapses. Genetics. 208 (2): 717-728.
32. Játiva, S. *et al.* (2019) Cdc14 activation requires coordinated Cdk1-dependent phosphorylation of Net1 and PP2A-Cdc55 at anaphase onset. Cell Mol Life Sci. 76 (18): 3601-20.
33. Tan, C.Y. & Hagen, T. (2013) mTORC1 dependent regulation of REDD1 protein stability. PLoS One. 8 (5): e63970.
34. Waizenegger, A. *et al.* (2020) Mus81-Mms4 endonuclease is an Esc2-STUbL-Cullin8 mitotic substrate impacting on genome integrity. Nat Commun. 11 (1): 5746.
35. Yahya, G. *et al.* (2020) Phospho-regulation of the Shugoshin - Condensin interaction at the centromere in budding yeast. PLoS Genet. 16 (8): e1008569.
36. Lee, B.G. *et al.* (2020) Cryo-EM structures of holo condensin reveal a subunit flip-flop mechanism. Nat Struct Mol Biol. 27 (8): 743-51.
37. Bajak, K. *et al.* (2020) A potential role for a novel ZC3H5 complex in regulating mRNA translation in *Trypanosoma brucei*. J Biol Chem. 295 (42): 14291-304.
38. Sabath, K. *et al.* (2020) INTS10-INTS13-INTS14 form a functional module of Integrator that binds nucleic acids and the cleavage module. Nat Commun. 11 (1): 3422.
39. Du, Z. *et al.* (2021) Structure-function analysis of oncogenic EGFR Kinase Domain Duplication reveals insights into activation and a potential approach for therapeutic targeting. Nat Commun. 12 (1): 1382.
40. Morafraile, E.C. *et al.* (2020) Exo1 phosphorylation inhibits exonuclease activity and prevents fork collapse in rad53 mutants independently of the 14-3-3 proteins. Nucleic Acids Res. 48 (6): 3053-70.
41. Ivanusic, D. *et al.* (2021) The large extracellular loop of CD63 interacts with gp41 of HIV-1 and is essential for establishing the virological synapse. Sci Rep. 11 (1): 10011.
42. Halova, L. *et al.* (2021) A TOR (target of rapamycin) and nutritional phosphoproteome of fission yeast reveals novel targets in networks conserved in humans. Open Biol. 11 (4): 200405.
43. Chung, C.S. *et al.* (2019) Dynamic protein-RNA interactions in mediating splicing catalysis. Nucleic Acids Res. 47 (2): 899-910.
44. Kovács, H.A. *et al.* (2021) Characterization of the Proprotein Convertase-Mediated Processing of Peroxidasin and Peroxidasin-like Protein Antioxidants. 10 (10): 1565.
45. Lucas, R.M. *et al.* (2021) SCIMP is a spatiotemporal transmembrane scaffold for Erk1/2 to direct pro-inflammatory signaling in TLR-activated macrophages. Cell Rep. 36 (10): 109662.
46. Kao, C.Y. *et al.* (2021) Evidence for complex dynamics during U2 snRNP selection of the intron branchpoint. Nucleic Acids Res. 49 (17): 9965-97.
47. Forey, R. *et al.* (2021) A Role for the Mre11-Rad50-Xrs2 Complex in Gene Expression and Chromosome Organization. Mol Cell. 81 (1): 183-197.e6.
48. Hassler, M. *et al.* (2019) Structural Basis of an Asymmetric Condensin ATPase Cycle. Mol Cell. 74 (6): 1175-1188.e9.
49. Bracci, N. *et al.* (2022) Rift Valley fever virus Gn V5-epitope tagged virus enables

identification of UBR4 as a Gn interacting protein that facilitates Rift Valley fever virus production. Virology. 567: 65-76.
50. Wang, Y.T. *et al.* (2022) K48/K63-linked polyubiquitination of ATG9A by TRAF6 E3 ligase regulates oxidative stress-induced autophagy. Cell Rep. 38 (8): 110354.
51. Zhu, H. *et al.* (2022) A comprehensive temporal patterning gene network in *Drosophila.* medulla neuroblasts revealed by single-cell RNA sequencing. Nat Commun. 13 (1): 1247.

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.
Guarantee	12 months from date of despatch
Acknowledgements	This product is manufactued under an exclusive license from the University of St. Andrews, UK.
Health And Safety Information	Material Safety Datasheet documentation #10040 available at: https://www.bio-rad-antibodies.com/SDS/MCA1360G 10040
Regulatory	For research purposes only

Related Products

Recommended Secondary Antibodies

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

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