

BM5015**Monoclonal Antibody to Adeno-associated Virus / AAV (VP1 + VP2 + VP3) - Purified**

Alternate names:	AAV1, AAV2, AAV3, AAV4, AAV5
Quantity:	1 ml
Host / Isotype:	Mouse / IgG1
Recommended Isotype Controls:	SM10P (for use in human samples), AM03095PU-N
Clone:	B1
Immunogen:	Adeno-associated virus 2 capsid proteins and virus particles.
Format:	State: Lyophilized purified IgG fraction Purification: Affinity Chromatography on Protein A ($\geq 95\%$ pure by SDS-PAGE) Buffer System: PBS, pH 7.4 Preservatives: 0.09% Sodium Azide Stabilizers: 0.5% BSA Reconstitution: Restore with 1 ml sterile PBS.
Applications:	Immunohistochemistry on Frozen Sections: 1/10. Immunohistochemistry on Paraffin Sections: 1/10 (microwave treatment recommended). Western Blot: 1/250. (Dilute with PBS or TBS). Immunoprecipitation (mainly free VP proteins). Affinity Chromatography. Immunofluorescence Microscopy. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
Specificity:	Useful for Immunolocalization studies of capsid formation in combination with monoclonal antibody A20 (<i>Cat. No.</i> BM5010). B1 reacts with free VP 1, VP 2 and VP 3 of adeno-associated virus and at a very reduced degree with assembled capsids. VP1 and VP2 are highly enriched in the nucleus, while non-assembled VP3 is evenly distributed in the nucleus and the cytoplasm. Epitope mapping experiments (Wobus et al., see below) identified amino acids 726 to aa733 (C-terminus; common to all 3 VP proteins) as the specific binding region. The antibody is also useful for characterization of different stages of infection. Reacts with AAV-2, found in Human and Monkey, and all published AAV serotypes (AAV-4 only weak cross-reaction, 11 & 12 no cross-reaction).
Species Reactivity:	Tested: Human and Monkey.

Storage:

Store lyophilized at 2-8°C for 6 months or at -20°C long term.
 After reconstitution store the antibody undiluted at 2-8°C for one month
 or (in aliquots) at -20°C long term.
 Avoid repeated freezing and thawing.
 Shelf life: one year from despatch.

General Readings:

1. Wistuba A, Weger S, Kern A, Kleinschmidt JA. Intermediates of adeno-associated virus type 2 assembly: identification of soluble complexes containing Rep and Cap proteins. *J Virol.* 1995 Sep;69(9):5311-9. PubMed PMID: 7636974.
2. Wistuba A, Kern A, Weger S, Grimm D, Kleinschmidt JA. Subcellular compartmentalization of adeno-associated virus type 2 assembly. *J Virol.* 1997 Feb;71(2):1341-52. PubMed PMID: 8995658.
3. Wobus CE, Hügler-Dörr B, Girod A, Petersen G, Hallek M, Kleinschmidt JA. Monoclonal antibodies against the adeno-associated virus type 2 (AAV-2) capsid: epitope mapping and identification of capsid domains involved in AAV-2-cell interaction and neutralization of AAV-2 infection. *J Virol.* 2000 Oct;74(19):9281-93. PubMed PMID: 10982375.
4. Sato Y, Asahi Y, Iwasaki T, Matsukura T, Kurata T, Sata T. Detection of adeno-associated virus type 2 in patients with viral infection. *Jpn J Infect Dis.* 1999 Apr;52(2):50-1. PubMed PMID: 10816616.
5. Zhang HG, Xie J, Dmitriev I, Kashentseva E, Curiel DT, Hsu HC, et al. Addition of six-His-tagged peptide to the C terminus of adeno-associated virus VP3 does not affect viral tropism or production. *J Virol.* 2002 Dec;76(23):12023-31. PubMed PMID: 12414944.
6. Yan Z, Zak R, Luxton GW, Ritchie TC, Bantel-Schaal U, Engelhardt JF. Ubiquitination of both adeno-associated virus type 2 and 5 capsid proteins affects the transduction efficiency of recombinant vectors. *J Virol.* 2002 Mar;76(5):2043-53. PubMed PMID: 11836382.
7. Sonntag F, Köther K, Schmidt K, Weghofer M, Raupp C, Nieto K, et al. The assembly-activating protein promotes capsid assembly of different adeno-associated virus serotypes. *J Virol.* 2011 Dec;85(23):12686-97. doi: 10.1128/JVI.05359-11. Epub 2011 Sep 14. PubMed PMID: 21917944.
8. Naumer M, Sonntag F, Schmidt K, Nieto K, Panke C, Davey NE, et al. Properties of the adeno-associated virus assembly-activating protein. *J Virol.* 2012 Dec;86(23):13038-48. doi: 10.1128/JVI.01675-12. Epub 2012 Sep 26. PubMed PMID: 23015698.