Product datasheet

anti-AAV VP1/VP2/VP3 mouse monoclonal, B1, AFDye 488 Conjugate

Short overview

Cat. No.	61058-488
Quantity	50 µg (100 µl)
Concentration	500 µg/ml

Product description

Host	Mouse
Antibody Type	Monoclonal
Isotype	IgG1
Clone	B1
Immunogen	AAV2 capsids
Formulation	Liquid; PBS + 0.09% sodium azide
Conjugate	AFDyeTM 488
Purification	Affinity chromatography
Storage	Up to 1 month: 2-8°C; long term storage in aliquots at -20°C; avoid freeze/thaw cycles
Intended use	Research use only
Application	WB
Reactivity	AAV1, AAV2, AAV3, AAV5, AAV6, AAV7, AAV8, AAV9, AAVDJ, AAVrh10

Applications

Western Blot (WB)	1:2,500-1:5,000 (0.1-0.2 µg/ml; detection limit 5E+09 capsids)

Background

The B1 antibody reacts with free VP1, VP2 and VP3 of adeno-associated virus (AAV) and at a reduced degree with assembled viral particles. 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., 2000) identified aa726 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.The AFDyTM 488 is a green emitting dye, structurally and spectrally equivalent to Alexa FluorR 488 and therefore ideally suited for the 488 nm laser line (excitation/emission 494/517 nm). It can be used with a common FITC filter set.

Wobus, C. E. et al. 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. 74, 928193 (2000).

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Product images

B1 epitopes in AAV serotypes

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AAV1       KSANVDFTVDNNGLYTEPRPIGTRYLTRPL
AAV2       KSVNVDFTVDTNGVYSEPRPIGTRYLTRNL
AAV-DJ     KSTSVDFAVNTEGVYSEPRPIGTRYLTRNL
AAV3B      KSVNVDFTVDTNGVYSEPRPIGTRYLTRNL
AAV4       QQNSLLWAPDAAGKYTEPRAIGTRYLTHHL
AAV5       DPQFVDFAPDSTGEYRTTRPIGTRYLTRPL
AAV6       KSANVDFTVDNNGLYTEPRPIGTRYLTRPL
AAV7       KQTGVDFAVDSQGVYSEPRPIGTRYLTRNL
AAV8       KSTSVDFAVNTEGVYSEPRPIGTRYLTRNL
AAV9       KSNNVEFAVNTEGVYSEPRPIGTRYLTRNL
AAVrh10    KSTNVDFAVNTEGTYSEPRPIGTRYLTRNL
AAVhu.37   KSTNVDFAVNTEGTYSEPRPIGTRYLTRNL
AAVrh74    KSTNVDFAVNTEGTYSEPRPIGTRYLTRNL
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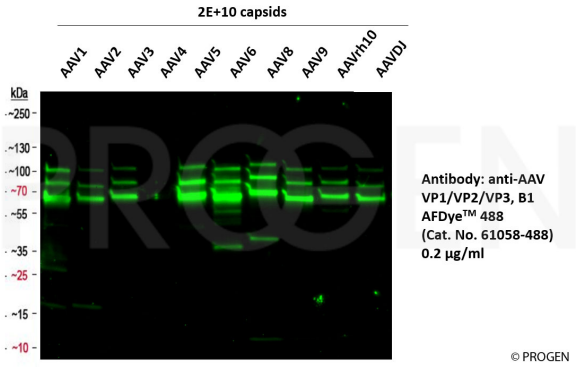
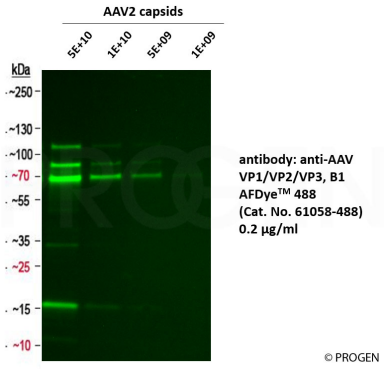
Alignment of B1 epitopes in different AAV serotypes.



WB with anti-AAV VP1/VP2/VP3 AFDyeTM 488 antibody (Cat. No. 61058-488, 0.2 ug/ml) using capsids of different AAV serotypes as sample.



WB with anti-AAV VP1/VP2/VP3 AFDyeTM 488 antibody (Cat. No. 61058-488, 0.2 ug/ml) using AAV2 capsids as sample.

References

Publication	Species	Application
Emmanuel, S. N. et al. Structurally Mapping Antigenic Epitopes of Adeno-associated Virus 9: Development of Antibody Escape Variants. J. Virol. 96, (2022).	AAV5, 9	dot blot
Meng, Y. et al. Cell-penetrating peptides enhance the transduction of adeno-associated virus serotype 9 in the central nervous system. Mol Ther Methods Clin Dev. 21, 28-41(2021).	AAV9	IHC/IF
Galibert, L. et al. Functional roles of the membrane-associated AAV protein MAAP. Sci. Rep. 11, (2021).	AAV2	WB
Kuklik, J. et al. Development of a bispecific antibody-based platform for retargeting of capsid modified aav vectors. Int. J. Mol. Sci. 22, 8355 (2021).	AAV2	WB
Zhang, R. et al. Divergent engagements between adeno-associated viruses with their cellular receptor AAVR. Nat.Commun. 10, 3760 (2019)	AAV	WB