Product datasheet

anti-AAV VP1/VP2/VP3 mouse monoclonal, B1, AFDye 647 Conjugate

Short overview

Cat. No.	61058-647
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 647
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	Dot blot, WB
Reactivity	AAV1, AAV2, AAV3, AAV5, AAV6, AAV7, AAV8, AAV9, AAVDJ, AAVrh10

Applications

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

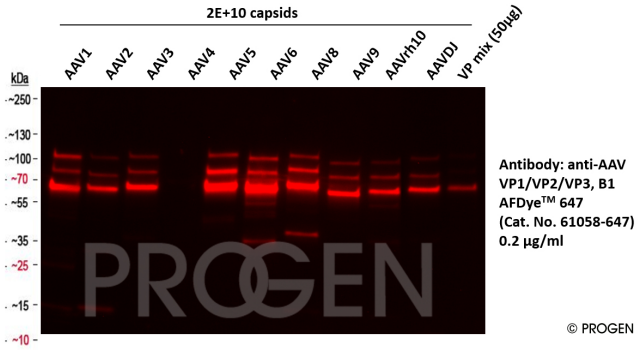
Background

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 AFDyeTM 647 is a bright, far-red-fluorescent dye ideally suited for the 633 nm or 647 nm laser lines (excitation/emission 648/671 nm). It is structurally similar to Alexa FluorR 647, and can be used with a common Cy5 filter set. A significant advantage to using long wavelength dyes such as Cy5 or AFDyeTM 647 dye over other fluorophores is the low autofluorescence of biological specimens in this region of the spectrum.

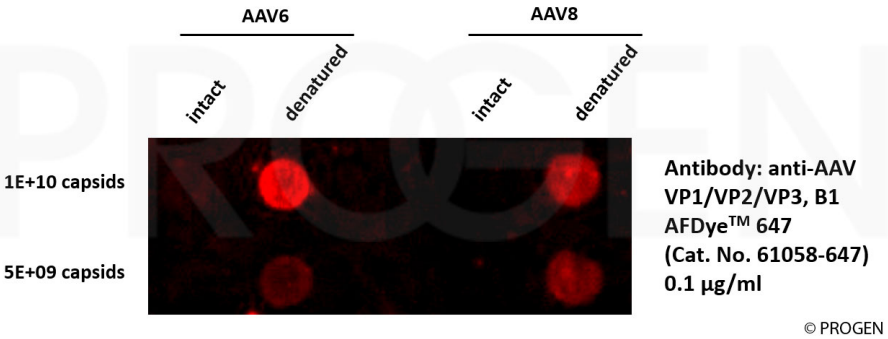
Wobus, C. E. et al. Monoclonal antibodies against the adeno-associated virus type 2 (AAV-2) capsid: epitope mapping and identification of capsid domains involved in AAV-2-cell interaction and neutralization of AAV-2 infection. J. Virol. 74, 9281-93 (2000).

Limited Use Label License: Research Use OnlyProduct is exclusively licensed to PROGEN Biotechnik GmbH. The use of these products for the development, manufacturing and sale of secondary products/derivatives which are based on the purchased products and/or which include the purchased product require a royalty based sub-license agreement.

Product images



WB with anti-AAV VP1/VP2/VP3 AFDyeTM 647 antibody (Cat. No. 61058-647, 0.2 ug/ml) using capsids of different AAVserotypes as sample



Dot blot with anti-AAV VP1/VP2/VP3 AFDyeTM 647 antibody (Cat. No. 61058-647, 0.1 ug/ml) using native and denatured capsids of the serotypes AAV6 and AAV8

B1 epitopes in AAV serotypes

```
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
```

Alignment of B1 epitopes in different AAV serotypes.

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