

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	AFDye TM 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

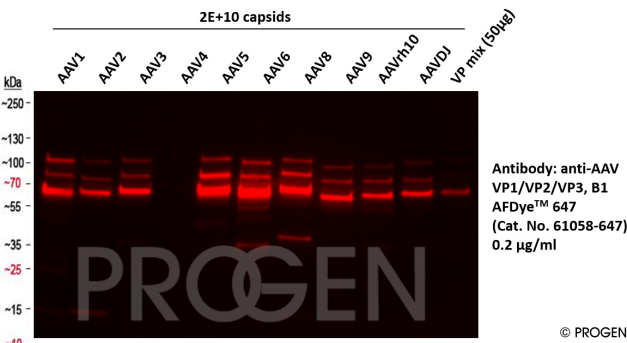
The B1 antibody reacts with free VP1, VP2 and VP3 of adeno-associated virus (AAV) and at a reduced degree with assembled viral particles. VP1 and VP2 are highly enriched in the nucleus, while non-assembled VP3 is evenly distributed in the nucleus and the cytoplasm. Epitope mapping experiments (Wobus 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 Fluor^R 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).

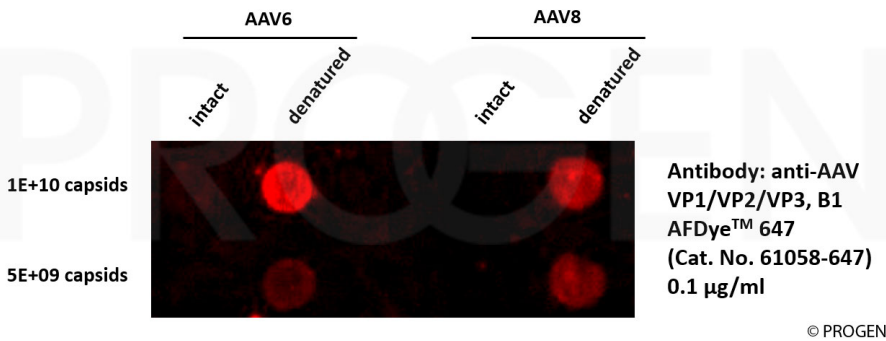
Alexa Fluor^R is a registered trademark of Thermo Fisher Scientific.

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Product images



WB with anti-AAV VP1/VP2/VP3 AFDye™ 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 AFDye™ 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	DPQFVDFAPDSTGEYRTRPIGTRYLTRPL
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
Zhang, R. et al. Divergent engagements between adeno-associated viruses with their cellular receptor AAVR. Nat. Commun. 10, 3760 (2019).	AAV	WB
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
François, A. et al. Accurate Titration of Infectious AAV Particles Requires Measurement of Biologically Active Vector Genomes and Suitable Controls. Mol. Ther. - Methods Clin. Dev. 10, 223â€“236 (2018).	AAV8	WB
Jin, L.-F. et al. Ultrasound Targeted Microbubble Destruction Stimulates Cellular Endocytosis in Facilitation of Adeno-Associated Virus Delivery. Int. J. Mol. Sci 14, 9737â€“9750 (2013).	AAV5	WB
Galibert, L. et al. Functional roles of the membrane-associated AAV protein MAAP. Sci. Rep. 11, (2021).	AAV2	WB