Product datasheet

anti-AAV8 (intact particle) mouse monoclonal, ADK8, lyophilized, purified

Short overview

Cat. No.	610160
Quantity	50 µg
Concentration	50 µg/ml after reconstitution with 1 ml dist. water

Product description

Host	Mouse
Antibody Type	Monoclonal
Isotype	IgG2a kappa
Formulation	Lyophilized; after reconstitution with 1 ml dist. water solution contains 0.09% sodium azide and 0.5% BSA in PBS
Binding affinity	KD value (AAV8) = <1.0E-12 M KD value (AAVrh10) = <1.0E-12 M KD value (AAVrh74) = <1.0E-12 M
Conjugate	Unconjugated
Purification	Affinity chromatography
Storage before reconstitution	2-8°C until indicated expiry date
Storage after reconstitution	Up to 3 months at 2-8°C; long term storage in aliquots at -20°C; avoid freeze/thaw cycles
Intended use	Research use only
Application	Dot blot, ELISA, ICC/IF, IP, Neutralization assay
Reactivity	AAV3, AAV7, AAV8, AAVrh10, AAVrh74, Anc80
No reactivity	AAV1, AAV11, AAV12, AAV2, AAV4, AAV5, AAV6, AAV9, AAVDJ

Applications

Dot Blot	1:100-1:500 (0.1-0.5 µg/ml; non-denaturing conditions)
ELISA	Assay dependent
Immunocytochemistry (ICC)	Assay dependent
Immunoprecipitation (IP)	Assay dependent
Neutralization Assay	EC50 ~14 ng/ml (AAV3), ~4 ng/ml (AAV8) - assay dependent

Background

For characterization of different stages of infection and very useful for the analysis of the AAV assembly process. ADK8 specifically reacts with AAV1, AAV3, AAV7, AAV8, AAVrh10, AAVrh74 and Anc80, empty and full capsids. Recognizes a conformational epitope of assembled capsids. Predicted binding site: residues 586-LQQQNT-591 (Gurda et al. 2012). The antibody cannot be used for immunoblotting using denaturing

conditions. The antibody is also useful for neutralizing experiments. Gurda, B. L. et al. Mapping a Neutralizing Epitope onto the Capsid of Adeno-Associated Virus Serotype 8. J. Virol. 86, 7739-7751 (2012).

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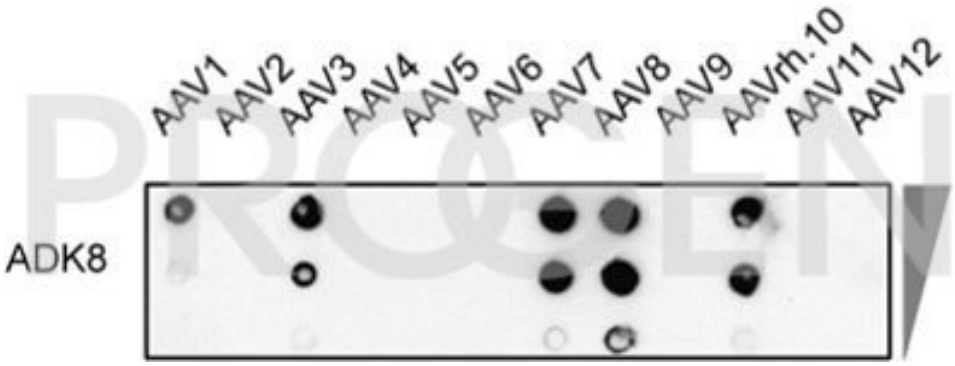
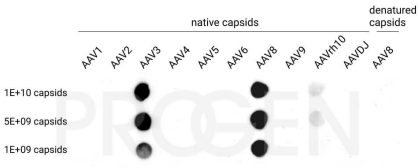
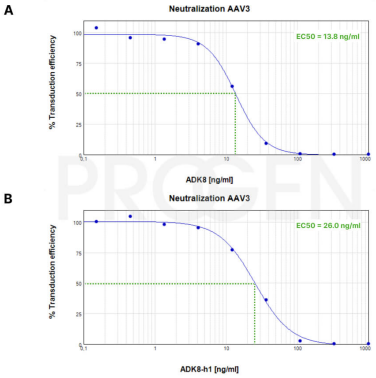
Product images



Dot blot with different AAV serotypes and mouse monoclonal anti-AAV8 antibody, clone ADK8 (Courtesy of Regina Heilbronn, Charité Universitätsmedizin Berlin, Mietzsch et al. Hum Gene Ther. 2014 Mar 1; 25(3):212-222)



Dot blot analysis of native AAV1-AAV9, AAVrh10, AAVDJ capsids (1E+09-1E+10 capsids) and denatured AAV8 capsids (1E+09-1E+10 capsids, denatured at 95°C for 10 min in sample buffer).The nitrocellulose membrane was blocked with 5% dry milk in PBST (PBS + 0.1% Tween 20) for 1 h at RT. The primary antibody anti-AAV8 (intact particle) mouse monoclonal, ADK8 was diluted in blocking buffer (antibody concentration 100 ng/ml) and incubated for 1 h at RT. The secondary antibody goat anti-mouse IgG HRP was also diluted in blocking buffer (antibody concentration 200 ng/ml) and incubated for 1 h at RT. The bands were visualized by chemiluminescent detection using Pierce ECL Plus Western Blotting Substrate.



Neutralization of AAV3 with mouse monoclonal AAV8 antibody clone ADK8 (A) and human chimeric AAV8 antibody clone ADK8-h1 (B) by using AAV3-NanoLuc® viral particles from Promega. (A) anti-AAV8 (intact particle) mouse monoclonal, ADK8 or (B) anti-AAV8, human chimeric, ADK8-h1 (Cat. No. 692318) were preincubated with AAV3-NanoLuc® viral particles for 30 min at RT at 300 rpm (antibody concentrations 0.2-3,000 ng/ml). HEK293 cells (100 µl) were plated at 200,000 cells/ml in DMEM + 1% FCS. Virus-antibody-mix (20 µl) was added to the cells and incubated for 16-24 h at 37°C. Extracellular NanoLuc Inhibitor and Nano-Glo® Live Cell Assay System (Promega) was added to the wells and incubated for 5 min at RT at 300 rpm. Luminescence was measured using an ID5-Reader and plotted with Softmax Pro 7.1 software to determine

the EC50 values.

References

Publication	Species	Application
FranÃ§ois, 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	ICC-IF
Haar, J., Blazevic, D., Strobel, B., Kreuz, S. & Michelfelder, S. MSD-based assays facilitate a rapid and quantitative serostatus profiling for the presence of anti-AAV antibodies. Mol. Ther. - Methods Clin. Dev. 25, 360â€“369 (2022).	AAV8	IA
Emmanuel, S. N., Mietzsch, M., Tseng, Y. S., Smith, J. K. & Agbandje-Mckenna, M. Parvovirus Capsid-Antibody Complex Structures Reveal Conservation of Antigenic Epitopes across the Family. Viral Immunol. 34, 3â€“17 (2021).	AAV8	binding region
Baatartsogt, N. et al. A sensitive and reproducible cell-based assay via secNanoLuc to detect neutralizing antibody against adeno-associated virus vector capsid. Mol. Ther. - Methods Clin. Dev. 22, 162â€“171 (2021).	AAV8	Neutralization
Gurda, B. L. et al. Mapping a Neutralizing Epitope onto the Capsid of Adeno-Associated Virus Serotype 8. J. Virol. 86, 7739-7751 (2012).	AAV8	ELISA,dot blot,ICC-IF,neutralization,epitope mapping