

Product datasheet

anti-AAV4 (intact particle) mouse monoclonal, ADK4, lyophilized, purified

Short overview

Cat. No.	610147
Quantity	50 µg
Concentration	50 µg/ml after reconstitution with 1 ml dist. water

Product description

Host	Mouse
Antibody Type	Monoclonal
Isotype	IgG2a kappa
Clone	ADK4
Immunogen	AAV4 capsids
Formulation	Lyophilized; reconstitute in 1 ml dist. water (final solution contains 0.09% sodium azide, 0.5% BSA in PBS buffer, pH 7.4)
Synonym	Adeno-associated virus 4; AAV-4
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	Affinity chromatography, Dot blot, ELISA, ICC/IF, IP
Reactivity	AAV4
No reactivity	AAV1, AAV11, AAV12, AAV2, AAV3, AAV5, AAV6, AAV7, AAV8, AAV9, AAVDJ, AAVrh10, AAVrh74

Applications

Affinity Chromatography	Assay dependent
Dot Blot	1:500 (0.1 µg/ml; non-denaturing conditions)
ELISA	Assay dependent
Immunocytochemistry (ICC)	1:20
Immunoprecipitation (IP)	1:5

Background

For characterization of different stages of infection and very useful for the analysis of the AAV assembly process. ADK4 specifically reacts with intact adeno-associated virus 4 particles, empty and full capsids. Recognizes a conformational epitope of assembled capsids, not present in

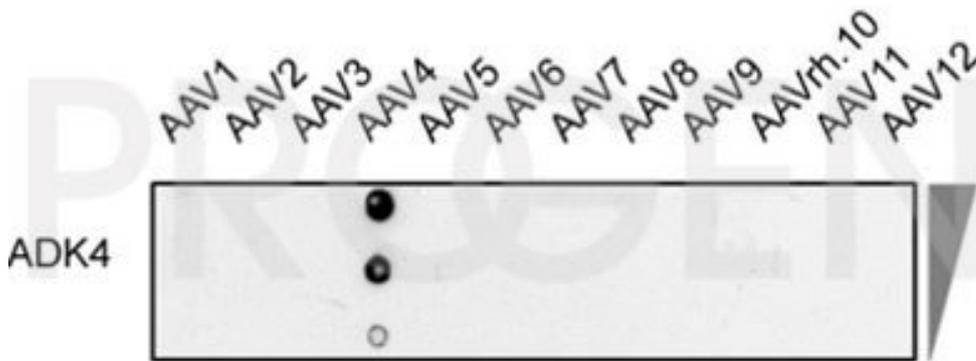
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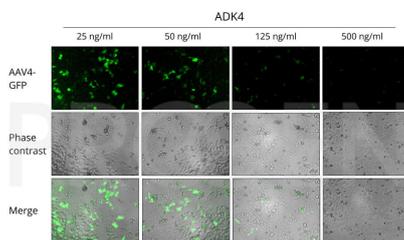
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denatured capsid proteins and native but unassembled capsid proteins. The antibody cannot be used for immunoblotting.

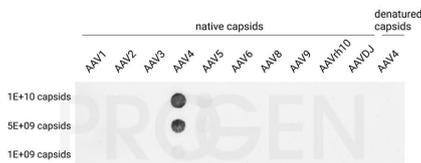
Product images



Dot blot with different AAV serotypes and mouse monoclonal anti-AAV4 antibody, clone ADK4 (Courtesy of Regina Heilbronn, Charité Universitätsmedizin Berlin, Mietzsch et al. Hum Gene Ther. 2014 Mar 1; 25(3):212-222)



Neutralization of AAV4-GFP vectors with the ADK4 antibody (Cat. No. 610147). AAV infection was shown in HeLa cells and photos (GFP, CPE, merge) were taken ~48 h post infection. Neutralization was enhanced with increasing ADK4 concentration.



Dot blot analysis of native AAV1-AAV9, AAVrh10, AAVDJ capsids (1E+09-1E+10 capsids) and denatured AAV4 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-AAV4 (intact particle) mouse monoclonal, ADK4 (Cat. No. 610147) 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.

References

Publication	Species	Application
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. <i>Viral Immunol.</i> 34, 3â€“17 (2021).	AAV4	binding region
Earley, L. F. et al. Adeno-associated Virus (AAV) Assembly-Activating Protein Is Not an Essential Requirement for Capsid Assembly of AAV Serotypes 4, 5, and 11. <i>J. Virol.</i> 91, 1980â€“1996 (2017).	AAV4	ICC-IF
Mietzsch, M. et al. OneBac: Platform for Scalable and High-Titer Production of Adeno-Associated Virus Serotype 1â€“12 Vectors for Gene Therapy. <i>Hum. Gene Ther.</i> 25, 212â€“222 (2014).	AAV4	dot blot
Kuck, D., Kern, A. & Kleinschmidt, J. A. Development of AAV serotype-specific ELISAs using novel monoclonal antibodies. <i>J. Virol. Methods</i> 140, 17â€“24 (2007).	AAV4	ELISA,dot blot,IP,ICC-IF