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)
Synomym	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

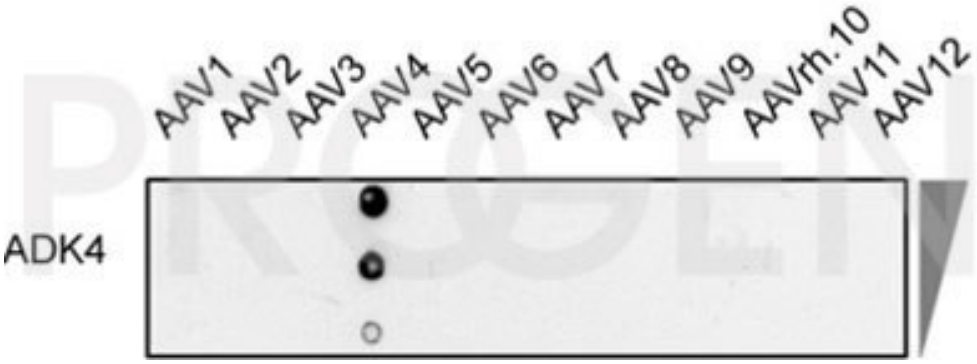
Affinity Chromatography	Assay dependent
Dot Blot	1:500 (0.1 µg/ml; non-denaturing conditions)
ELISA	Assay dependent
Immunocytochemistry (ICC)	1:20
Immunoprecipitation (IP)	1:5

Background

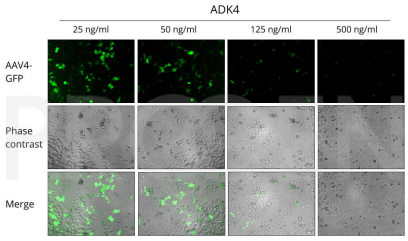
For characterization of different stages of infection and very useful for the analysis of the AAV assembly process.ADK4 specifically reacts with intact adeno-associated virus 4 particles, empty and full capsids. Recognizes a conformational epitope of assembled capsids, not present in

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

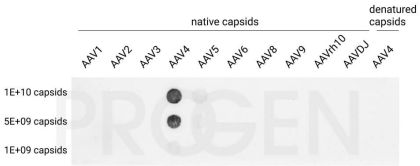
Product images



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. Viral Immunol. 34, 3â€“17 (2021).	AAV4	binding region
Mietzsch, M. et al. OneBac: Platform for Scalable and High-Titer Production of Adeno-Associated Virus Serotype 1â€“12 Vectors for Gene Therapy. Hum. Gene Ther. 25, 212â€“222 (2014).	AAV4	dot blot
Kuck, D., Kern, A. & Kleinschmidt, J. A. Development of AAV serotype-specific ELISAs using novel monoclonal antibodies. J. Virol. Methods 140, 17â€“24 (2007).	AAV4	ELISA,dot blot,IP,ICC-IF
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. J. Virol. 91, 1980â€“1996 (2017).	AAV4	ICC-IF