

Adenovirus Fiber (Monomer and Trimer) Ab-4 (Clone 4D2)

Mouse Monoclonal Antibody

Cat. #MS-1027-P0, -P1, or -P (0.1ml, 0.5ml, or 1.0ml at 200µg/ml) (Purified Ab with BSA and Azide)

Cat. #MS-1027-P1ABX or -PABX (0.1ml or 0.2ml at 1.0mg/ml) (Purified Ab without BSA and Azide)

Description: Adenovirus capsid proteins are synthesized in the cytoplasm and transported to the nucleus for assembly into the virus particles. The three major capsid proteins (hexon, penton base, and fiber) are synthesized late in infection. Fiber plays a crucial role in adenovirus infection by attaching the virus to a specific receptor on the cell surface. Ad2 and Ad5 fibers are proposed to consist of three domains: an N-terminal tail that interacts with penton base, a shaft composed of 22 repeats of a 15 amino acid segment that forms beta-sheet and beta-bends, and a knob at the C-terminus that contains the type-specific antigen and is responsible for binding to the cell surface receptor. It is shown that the fiber of Ad2 is most likely a trimer when found on the viron.

Comments: Ab-4 recognizes both monomers and trimers, as judged by reactivity with both boiled (monomers (62kDa) only) and unboiled (both monomers and trimers (180-200kDa bands)) fiber on Western blots and by indirect immunofluorescence studies of cells infected with a temperature-sensitive Ad5 fiber mutant (H5ts142) which does not form trimers at the nonpermissive temperature at both 32°C and 39.5°C.⁽¹⁾

Mol. Wt. of Antigen: 62kDa (monomer) and 180-200kDa (trimer)

Epitope: N-terminus, probably the first 17aa.

Species Reactivity: Adenovirus.

Clone Designation: 4D2

Ig Isotype/Light Chain: IgG_{2a} / κ

Immunogen: UV-irradiated Ad2 virus.

Applications and Suggested Dilutions:

- Inhibition of Ad2 attachment (Not suitable)⁽²⁾
- Immunofluorescence⁽¹⁾
- Western Blotting⁽¹⁾

The optimal dilution for a specific application should be determined by the investigator.

Positive Control: Adenovirus infected cells and tissues.

Cellular Localization: Nuclear

Supplied As:

200µg/ml antibody purified from the ascites fluid by Protein A chromatography. Prepared in 10mM PBS, pH 7.4, with 0.2% BSA and 0.09% sodium azide. Also available without BSA and azide at 1mg/ml.

Storage and Stability:

Ab with sodium azide is stable for 24 months when stored at 2-8°C. Antibody WITHOUT sodium azide is stable for 36 months when stored at below 0°C.

Key References:

1. Hong, J.S., Engler, J.A. *Virology*, 185, 758-767, 1991. Material Safety Data:
2. Hong, J.S., Engler, J.A. *J. Virology*, 70, 7071-7078, 1996.

Limitations and Warranty:

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Material Safety Data:

This product is not licensed or approved for administration to humans or to animals other than the experimental animals. Standard Laboratory Practices should be followed when handling this material. The chemical, physical, and toxicological properties of this material have not been thoroughly investigated. Appropriate measures should be taken to avoid skin and eye contact, inhalation, and ingestion. The material contains 0.09% sodium azide as a preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material as indicated above. The National Institute of Occupational Safety and Health has issued a bulletin citing the potential explosion hazard due to the reaction of sodium azide with copper, lead, brass, or solder in the plumbing systems. Sodium azide forms hydrazoic acid in acidic conditions and should be discarded in a large volume of running water to avoid deposits forming in metal drainage pipes.

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