



# Cytomegalovirus

*IHC of CMV on an FFPE Infected Lung Tissue*

**Description** Cytomegalovirus (CMV) is a virus of the Herpes-virus group; in humans it is commonly known as HCMV or Human Herpesvirus 5 (HHV-5). CMV belongs to the Betaherpesvirinae subfamily of Herpesviridae, which also includes Roseolovirus. CMV especially attacks salivary glands. CMV infection can also be life-threatening for patients who are immunocompromised (e.g., patients with HIV or organ-transplant recipients). CMV viruses are found in many mammal species, but CMV species isolated from animals differ from human CMV in terms of genomic structure, and have not been reported to cause human disease.

This Anti-cytomegalovirus antibody cocktail reacts with two different epitopes. The DDG9 antibody reacts with a 76 kDa protein produced by CMV. CCH2 antibody reacts with the early DNA-binding protein p52. There is no cross-reactivity with other Herpesviruses or Adenoviruses. CMV infection is usually seen in immunocompromised patients and involves the GI tract, lung, heart and liver, as well as other organs.

<b>Antibody Type</b>	Mouse Monoclonal	<b>Clone</b>	DDG9 & CCH2
<b>Isotype</b>	IgG2/K & IgG1/K	<b>Reactivity</b>	Paraffin, Frozen
<b>Localization</b>	Nuclear	<b>Control</b>	Infected Tissue
<b>Storage</b>	Store at 2°-8°C	<b>Stability</b>	2 years

For long-term storage of the concentrated antibody, it is recommended that aliquots of the antibody be frozen at -20°C in glycerol 50% (frost-free freezers are not recommended). Repeated freezing and thawing must be avoided. Dilute using an antibody diluent such as ImmunoDetector Protein Block/Antibody Diluent (BSB 0040 and BSB 0041) or ImmunoDNA Background Blocker (BSB 0103-BSB 0107).

**Presentation** CMV is a cocktail of two mouse monoclonal antibodies derived from cell culture supernatant that is concentrated, dialyzed, filter sterilized and diluted in buffer pH 7.5, containing BSA and sodium azide as a preservative.

Availability	Catalog No.	Antibody Type	Dilution	Volume/QTY
	BSB 5449	Prediluted	Ready-To-Use	3.0 ml
	BSB 5450	Prediluted	Ready-To-Use	7.0 ml
	BSB 5451	Prediluted	Ready-To-Use	15.0 ml
	BSB 5452	Concentrated	1:10-1:50	0.1 ml
	BSB 5453	Concentrated	1:10-1:50	0.5 ml
	BSB 5454	Concentrated	1:10-1:50	1.0 ml
	BSB 5455	Control Slides		5

**Note:** For concentrated antibodies, please centrifuge prior to use to ensure recovery of all product.

**References**

- Plachter B, et al. *Virus Research*. 1992;24:265-76
- Silverberg SG, et al. *Principles and Practice of Surgical Pathology and Cytopathology*. 1997;217-218.

**Protocol** Suggested protocol on reverse

## Recommended Immunohistochemical Protocol

- Pretreatment**
1. Cut and mount 3-4 micron formalin-fixed paraffin-embedded tissues on positive charged slides.
  2. Air dry for 2 hours at 58° C.
  3. Deparaffinize, dehydrate and rehydrate tissues.
  4. Subject tissues to heat epitope retrieval using a suitable retrieval solution such as **ImmunoDNA Retriever with Citrate** (BSB 0020-BSB 0023) or **EDTA** (BSB 0030-BSB 0033).
  5. Any of three heating methods may be used:
    - a. **Electric Pressure Cooker**  
Place standoff rack at base of pressure cooker. Add 1-2 inches of distilled water to the pressure cooker and turn heat to high, and incubate for 15 minutes. Open and immediately transfer slides to room temperature.
    - b. **Water Bath Method**  
Place tissues/slides in a pre-warmed staining dish or coplin jar containing the **ImmunoDNA Retriever with Citrate** or **EDTA** in a water bath set at 95°-99° C. Incubate for 30-60 minutes.
    - c. **Conventional Steamer Method**  
Place tissues/slides in a pre-warmed staining dish or coplin jar containing the **ImmunoDNA Retriever with Citrate** or **EDTA** in a Steamer, cover and steam for 30-60 minutes.
  6. After heat treatment, transfer slides in **ImmunoDNA Retriever with Citrate** or **EDTA** to room temperature and let stand for 15-20 minutes.
  7. Wash slides with IHC wash buffer or DI water.
  8. Continue IHC staining protocol.

## Immunohistochemical Protocol

Step	ImmunoDetector (AP or HRP)	PolyDetector (AP or HRP)
Peroxidase/AP Block	5 minutes	5 minutes
Primary Antibody	30 minutes	45 minutes
Secondary Biotinylated Link	10 minutes	Not Applicable
AP or HRP Label	10 minutes	45 minutes
Substrate-Chromogen	5-10 minutes	10 minutes
Counterstaining	Time varies with counterstain	Time varies with counterstain

