

# PRODUCT INFORMATION



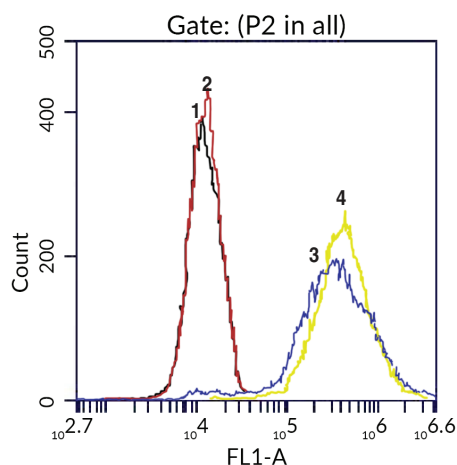
## Cytokeratin Monoclonal FITC Antibody (Clone C-11)

Item No. 10349

### Overview and Properties

**Contents:** This vial contains 100 µg of protein A-purified, fluorescein-labeled monoclonal antibody.  
**Synonyms:** CKs, Keratin, pan-Cytokeratin  
**Cross Reactivity:** (+) Cytokeratins 4, 5, 6, 8, 10, 13, and 18  
**Species Reactivity:** (+) Human  
**Form:** Liquid  
**Storage:** -20°C (as supplied)  
**Stability:** ≥1 year  
**Storage Buffer:** PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide  
**Clone:** C-11  
**Host:** Mouse  
**Applications:** Flow cytometry (FC) and immunofluorescence (IF). The recommended starting concentration for FC is 1 µg/test and IF is 1 µg/ml. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Image



**Black 1:** Method Control  
**Red 2:** 1:500 Goat anti-mouse IgG+IgM FITC  
**Blue 3:** 1 µg/ml Cytokeratin Monoclonal Antibody (Clone C-11) + 1:500 Goat anti-mouse IgG+IgM FITC  
**Yellow 4:** 1 µg/ml Cytokeratin Monoclonal FITC Antibody (Clone C-11)

Figure 1: A549 cells were stained indirectly or directly for cytokeratins with Cayman's Cytokeratin Monoclonal Antibody (Clone C-11) (Catalog No. 10004600), Goat anti-Mouse IgG + IgM FITC (Catalog No. 10006617), or Cytokeratin Monoclonal FITC Antibody, respectively.

WARNING  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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## Description

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Cytokeratins (CKs) are intermediate filaments proteins and members of the cytokeratin protein family.<sup>1-3</sup> The cytokeratin family is composed of at least 20 unique gene products, which fall into two categories: type I acidic cytokeratins, CK9-CK20, and type II neutral-basic cytokeratins, CK1-CK8.<sup>2</sup> Each cytokeratin is composed of a central rod containing four  $\alpha$ -helical domains, which are important for self-assembly, and non-helical head and tail domains at the N- and C-termini, respectively.<sup>2,3</sup> Cytokeratins are major structural proteins expressed in epithelial cells and localized to the cytoplasm where they form heterozygous type I-type II pairs.<sup>1,4</sup> They primarily function to protect epithelial cells from mechanical and non-mechanical stresses that induce cell rupture and death.<sup>2</sup> Cytokeratins have additional isoform- and tissue-specific functions, including the modulation of protein synthesis and cell size during epithelial growth and roles in skin pigmentation. Cayman's Cytokeratin Monoclonal FITC Antibody (Clone C-11) can be used for flow cytometry (FC) and immunofluorescence (IF) applications. This antibody recognizes cytokeratins 4, 5, 6, 8, 10, 13, and 18 from human samples.

## References

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1. Weng, Y.-R., Cui, Y., and Fang, J.-Y. Biological functions of cytokeratin 18 in cancer. *Mol. Cancer Res.* **10(4)**, 485-493 (2012).
2. Gu, L.H., and Coulombe, P.A. Keratin function in skin epithelia: A broadening palette with surprising shades. *Curr. Opin. Cell Biol.* **19(1)**, 13-23 (2007).
3. Eldirany, S.A., Lomakin, I.B., Ho, M., *et al.* Recent insight into intermediate filament structure. *Curr. Opin. Cell Biol.* **68**, 132-143 (2021).
4. Ditzel, H.J., Strik, M.C.M., Larsen, M.K., *et al.* Cancer-associated cleavage of cytokeratin 8/18 heterotypic complexes exposes a neopeptide in human adenocarcinomas. *J. Biol. Chem.* **277(24)**, 21712-21722 (2002).

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