

# Anti-Mouse CD69 Antibody, Clone H1.2F3, FITC

Hamster (Armenian) monoclonal antibody against mouse CD69, FITC-conjugated

Catalog #100-1617

100 µg

0.5 mg/mL

## Product Description

This monoclonal antibody reacts with mouse cluster of differentiation 69 (CD69), a type II transmembrane glycoprotein. CD69 is a 60 kDa disulfide bonded homodimer expressed on activated T cells, B cells, NK cells, neutrophils, and monocytes, where induction of CD69 rapidly occurs upon activation. CD69 is constitutively expressed on platelets and a subset of thymocytes. It functions as a co-stimulatory molecule that plays a role in activating and promoting the proliferation of T cells. Additionally, it can serve as an indicator for thymocytes engaged in T cell receptor (TCR)-mediated positive selection. Furthermore, the protein may act to transmit signals in natural killer cells and platelets. It has also been documented that co-stimulation with the H1.2F3 antibody clone enhances the activation of T cells and macrophages. CD69 dysfunction is associated with diseases such as coccidioidomycosis and asthma.

Target Antigen:	CD69
Alternative Names:	AIM, CLEC2C, EA1, gp34/28, Leu23, MLR3, VEA, very early activation antigen
Gene ID:	12515
Species Reactivity:	Mouse
Host Species:	Hamster
Clonality:	Monoclonal
Clone:	H1.2F3
Isotype:	Armenian hamster IgG
Immunogen:	Mouse dendritic epidermal T cell line Y245
Conjugate:	FITC (Fluorescein isothiocyanate)

## Applications

Verified Applications: FC

Reported Applications: FC

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; FCXM: Flow cytometric crossmatch assay; FISH: Fluorescence in situ hybridization; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IHC-F: Immunohistochemistry (frozen-tissue); IHC-P: Immunohistochemistry (paraffin-embedded); IP: Immunoprecipitation; NMR: Nuclear magnetic resonance spectroscopy; RIA: Radioimmunoassay; WB: Western blotting

## Properties

**Product Formulation:** Phosphate-buffered saline, pH 7.2, containing 0.09% sodium azide and 0.1% gelatin

**Purification:** The antibody was purified by affinity chromatography and conjugated with FITC under optimal conditions. The solution is free of unconjugated FITC.

**Stability and Storage:** Product stable at 2 - 8°C when stored undiluted. Do not freeze. Protect product from prolonged exposure to light. Stable until expiry date (EXP) on label.

**Directions for Use:** For flow cytometry, the suggested use of this antibody is  $\leq 1 \mu\text{g}$  per  $1 \times 10^6$  cells in 100  $\mu\text{L}$ . It is recommended that the antibody be titrated for optimal performance for each application.

## Related Products

For a complete list of antibodies, including other conjugates, sizes, and clones, as well as related products available from STEMCELL Technologies, visit [www.stemcell.com/antibodies](http://www.stemcell.com/antibodies), or contact us at [techsupport@stemcell.com](mailto:techsupport@stemcell.com).

## References

- Bremser A et al. (2015) Higher sensitivity of Foxp3+ Treg compared to Foxp3- conventional T cells to TCR-independent signals for CD69 induction. *PLoS One* 10(9): e0137393.
- Cibrián D & Sánchez-Madrid F. (2017) CD69: from activation marker to metabolic gatekeeper. *Eur J Immunol* 47(6): 946–53.
- Hirai T et al. (2021) Competition for active TGF $\beta$  cytokine allows for selective retention of antigen-specific tissue- resident memory T cells in the epidermal niche. *Immunity* 54(1): 84–98.
- Mackay LK et al. (2015) Cutting edge: CD69 interference with sphingosine-1-phosphate receptor function regulates peripheral T cell retention. *J Immunol* 194(5): 2059–63.
- Radulovic K et al. (2012) CD69 regulates type I IFN-induced tolerogenic signals to mucosal CD4 T cells that attenuate their colitogenic potential. *J Immunol* 188(4): 2001–13.
- Radulovic K & Niess JH. (2015) CD69 is the crucial regulator of intestinal inflammation: a new target molecule for IBD treatment? *J Immunol Res* 2015: 497056.
- Stepanek O et al. (2013) Nonredundant roles of Src-family kinases and Syk in the initiation of -B cell antigen receptor signaling. *J Immunol* 190(4): 1807–18.
- Sun L et al. (2021) Activating a collaborative innate-adaptive immune response to control metastasis. *Cancer Cell* 39(10): 1361–74.

PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Copyright © 2024 by STEMCELL Technologies Inc. All rights reserved including graphics and images. STEMCELL Technologies & Design, STEMCELL Shield Design, and Scientists Helping Scientists are trademarks of STEMCELL Technologies Canada Inc. All other trademarks are the property of their respective holders. While STEMCELL has made all reasonable efforts to ensure that the information provided by STEMCELL and its suppliers is correct, it makes no warranties or representations as to the accuracy or completeness of such information.