

Anti-CaMPARI-Red [4F6]

Catalogue number: 154043

Sub-type:

Images:

Contributor

Inventor: Eric Schreiter

Institute: Howard Hughes Medical Institute

Images:

Tool details

***FOR RESEARCH USE ONLY**

Name: Anti-CaMPARI-Red [4F6]

Alternate name:

Class: Monoclonal

Conjugate: Unconjugated

Description: CaMPARI (Calcium Modulated Photoactivatable Ratiometric Integrator) is a photoconvertible protein construct that allows imaging of the integrated calcium activity of populations of cells over time. CaMPARI 2.0 is the second generation of CaMPARI molecules with improved green brightness by 50% and red brightness by 250%. Additionally, CaMPARI 2.0 has faster kinetics, and a lower photoconversion rate in low calcium conditions resulting in a net 100-fold difference in green-to-red switching in low- vs. high-calcium conditions. Lastly, these different CaMPARI proteins display a range of sensitivity in their calcium binding (K_d 's ranging from 100 nM to 1 μ M of free calcium). The variable domain region of the original mouse IgG1 antibody was reformatted to generate the Fab fragment and the chimeric rabbit IgG.

Purpose:

Parental cell:

Organism:

Tissue:

Model:

Gender:

Isotype: IgG2a

Reactivity:

Selectivity:

Host: Mouse

Immunogen: Purified and photoconverted EosFP protein, subjected to proteolysis, and further purified the proteolytic fragment containing the red chromophore which is identical to the equivalent

region of CaMPARI1 and CaMPARI2.

Immunogen UNIPROT ID:

Sequence:

Growth properties:

Production details:

Formulation:

Recommended controls:

Bacterial resistance:

Selectable markers:

Additional notes:

Target details

Target: CaMPARI1 and CaMPARI2

Target alternate names:

Target background: CaMPARI (Calcium Modulated Photoactivatable Ratiometric Integrator) is a photoconvertible protein construct that allows imaging of the integrated calcium activity of populations of cells over time. CaMPARI 2.0 is the second generation of CaMPARI molecules with improved green brightness by 50% and red brightness by 250%. Additionally, CaMPARI 2.0 has faster kinetics, and a lower photoconversion rate in low calcium conditions resulting in a net 100-fold difference in green-to-red switching in low- vs. high-calcium conditions. Lastly, these different CaMPARI proteins display a range of sensitivity in their calcium binding (K_d 's ranging from 100 nM to 1 μ M of free calcium).

Molecular weight:

Ic50:

Applications

Application: IHC ; WB

Application notes: 4F6 antibody is recommended for the detection and analysis of CaMPARI via immunohistochemistry and Western blot. For instance, it was successfully used in the immunohistochemical identification of CaMPARI-Red cells in brain tissue, distinguishing them from the cells in which CaMPARI stayed in its green, unconverted form (Ebner et al., 2019).

Handling

Format: Liquid

Concentration: 0.9-1.1mg/ml

Passage number:

Growth medium:

Temperature:

Atmosphere:

Volume:

Storage medium:

Storage buffer: PBS with 0.02% azide

Storage conditions: -80° C

Shipping conditions: Shipping at 4° C

Related tools

Related tools:

References

References: Savitt et al. 2009. Clin Vaccine Immunol. 16(3):414-22. PMID: 19176692. ; Francisella tularensis infection-derived monoclonal antibodies provide detection, protection, and therapy.

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