Mouse monoclonal antibody to mCherry [1C51]: IgG

Catalogue No.:	M-1653-100
Description:	mCherry is an engineered derivative of one of a family of proteins originally isolated from Cnidarians (jelly fish, sea anemones and corals). The mCherry protein was derived from DsRed, a red fluorescent protein from so-called disc corals of the genus Discosoma. DsRed is a 223 amino acid ~28kDa protein similar in size and properties to GFP, but, obviously, produces a red rather than a green fluorochrome. The original DsRed was engineered extensively in the Tsien lab to prevent it from forming tetramers and dimers and to modify and improve the spectral properties (1-3). The resulting monomeric protein is useful for applications such as Foerster Resonance Energy Transfer (FRET, also known as Fluorescence Resonance Energy Transfer). Several further cycles of mutation, directed modification and evolutionary selection produced mCherry, which is monomeric and has an excitation maximum at 587 nm and and emission maximum at 610 nm (4).
Unit size:	100 ug
Antigen:	Recombinant full length mCherry expressed and purified from E. coli.
Isotype:	IgG2a
Clone:	1C51
Produced in:	Mouse
Applications:	Western Blotting (WB) and Immunocytochemistry (IC). A dilution of 1:1,000 to 1:2,000 is recommended for WB. A dilution of 1:250 to 1:500 is recommended for IC. Biosensis recommends optimal dilutions/concentrations should be determined by the end user.
Specificity:	The antibody reacts with a band at ~28 kDa corresponding to intact full-length mCherry by Western blot on HEK293 cells transfected with mCherry vector. It has also been used successfully for immunocytochemistry.
Species Against:	Species independent
Antibody Against:	mCherry
Form:	Lyophilized from a solution containing 0.1% trehalose in PBS, pH 7.4, containing 5 mM NaN3 as preservative.
Appearance:	White powder
Reconstitution:	Reconstitute with 100 uL sterile-filtered, ultrapure water, to achieve an antibody concentration of 1 mg/mL. Centrifuge briefly to remove any insoluble material.
Storage:	Store lyophilised, unopened vial at 2-8C or lower. After reconstitution, prepare aliquots and store at -20C for a higher stability. Avoid freeze-thaw cycles.
Expiry Date:	12 months after purchase (lyophilized).
General References:	1. Chalfie M, Tu Y, Euskirchen G, Ward WW, Prasher DC Green fluorescent protein as a marker for gene expression. Science. 263:802-5 (1994). 2. Baird GS, Zacharias DA, Tsien RY. Biochemistry, mutagenesis, and oligomerization of DsRed, a red fluorescent protein from coral. Proc Natl Acad Sci U S A. 97:11984-9 (2000).

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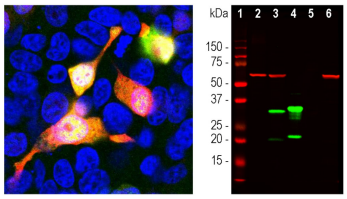
3. Gross LA, Baird GS, Hoffman RC, Baldridge KK, Tsien RY. The structure of the chromophore within DsRed, a red fluorescent protein from coral. Proc Natl Acad Sci U S A. 97:11990-5 (2000).

4. Heikal AA, Hess ST, Baird GS, Tsien RY, Webb WW. Molecular spectroscopy and dynamics of intrinsically fluorescent proteins: coral red (dsRed) and yellow (Citrine). Proc Natl Acad Sci U S A. 97:11996-2001 (2000).

5. Shaner NC, Campbell RE, Steinbach PA, Giepmans BN, Palmer AE, Tsien RY. Improved monomeric red, orange and yellow fluorescent proteins derived from Discosoma sp. red fluorescent protein. Nature Biotechnology 22:1567-1572 (2004).



Left: Detection of mCherry protein (red) in transfected HEK293 cells by Immunocytochemistry. The cells were stained with anti-mCherry antibody in the green channel. Transfected cells appear yellow, showing overlap of the transfected mCherry protein and the anti-mCherry antibody. Untransfected HEK293 cells do not express mCherry and do not stain with the antibody, but their nuclei can be visualized using a DNA stain (blue). Right: Western blot analysis of HEK293 cell lysates, and recombinant protein solutions using mouse antibody to mCherry (green, 1:1,000). [1] protein standard, [2] HEK293 control cells, [3] HEK293 cells transfected with mCherry-HA construct, [4] mCherry recombinant protein, [5] GFP recombinant protein, and [6] HEK293 transfected with GFP construct. The major band at about 30 kDa corresponds to mCherry protein. The antibody does not react with GFP protein. The same blot was simultaneously probed an antibody to HSP60 (red, lanes 2-6).

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