



## Mouse monoclonal antibody to mCherry: IgG

<b>Catalogue No.:</b>	M-1653-100
<b>Description:</b>	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 <i>Discosoma</i> . 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).
<b>Unit size:</b>	100 ug
<b>Antigen:</b>	Recombinant full length mCherry expressed and purified from <i>E. coli</i> .
<b>Antibody Type:</b>	Liquid in Phosphate Buffered Saline. The antibody has been purified from tissue culture supernatant.
<b>Isotype:</b>	IgG2a
<b>Produced in:</b>	Mouse
<b>Applications:</b>	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.
<b>Specificity:</b>	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.
<b>Species Against:</b>	Species independent
<b>Antibody Against:</b>	mCherry
<b>Form:</b>	Lyophilized
<b>Appearance:</b>	White powder
<b>Reconstitution:</b>	Reconstitute in sterile distilled water. Centrifuge to remove any insoluble material.
<b>Storage:</b>	After reconstitution of lyophilized antibody, aliquot and store at -20C for a higher stability. Avoid freeze-thaw cycles.
<b>Expiry Date:</b>	12 months after purchase
<b>General References:</b>	<ol style="list-style-type: none"><li>1. Chalfie M, Tu Y, Euskirchen G, Ward WW, Prasher DC Green fluorescent protein as a marker for gene expression. <i>Science</i>. 263:802-5 (1994).</li><li>2. Baird GS, Zacharias DA, Tsien RY. Biochemistry, mutagenesis, and oligomerization of DsRed, a red fluorescent protein from coral. <i>Proc Natl Acad Sci U S A</i>. 97:11984-9 (2000).</li></ol>

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3. Gross LA, Baird GS, Hoffman RC, Baldrige 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).

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