



# DsRed (E-8): sc-390909

## BACKGROUND

Plasmid vectors for the expression of coding regions of eukaryotic genes in bacterial, insect and mammalian hosts are in common usage; such expression vectors are frequently used to encode hybrid fusion proteins consisting of a eukaryotic target protein and a specialized region designed for fluorescent visualization of the fusion protein. DsRed is a red fluorescent protein cloned by homology to green fluorescent protein (GFP) from *Discosoma* coral. DsRed exhibits excellent resistance to pH extremes and photobleaching and causes a strong red-shift from 558 nm to 583 nm once matured. Immature DsRed shows GFP-like excitation and emission maxima. The contrast created through GFP and DsRed spectral shifts allows for a powerful dual reporter system.

## REFERENCES

1. Wall, M.A., et al. 2000. The structural basis for red fluorescence in the tetrameric GFP homolog DsRed. *Nat. Struct. Biol.* 7: 1133-1138.
2. Baird, G.S., et al. 2000. Biochemistry, mutagenesis, and oligomerization of DsRed, a red fluorescent protein from coral. *Proc. Natl. Acad. Sci. USA* 22: 11984-11989.

## SOURCE

DsRed (E-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 178-223 at the C-terminus of DsRed of *Discosoma Sp.* origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

DsRed (E-8) is available conjugated to agarose (sc-390909 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390909 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390909 PE), fluorescein (sc-390909 FITC), Alexa Fluor® 488 (sc-390909 AF488), Alexa Fluor® 546 (sc-390909 AF546), Alexa Fluor® 594 (sc-390909 AF594) or Alexa Fluor® 647 (sc-390909 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390909 AF680) or Alexa Fluor® 790 (sc-390909 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-390909 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## APPLICATIONS

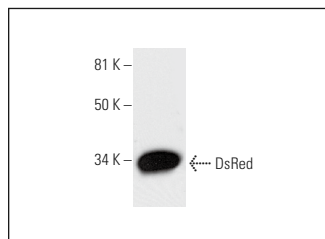
DsRed (E-8) is recommended for detection of proteins containing the DsRed tag by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of DsRed: 28 kDa.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## DATA



DsRed (E-8): sc-390909. Western blot analysis of purified recombinant DsRed.

## SELECT PRODUCT CITATIONS

1. Honda, A., et al. 2017. Flexible adaptation of male germ cells from female iPSCs of endangered *Tokudaia osimensis*. *Sci. Adv.* 3: e1602179.
2. Calipari, E.S., et al. 2018. Granulocyte-colony stimulating factor controls neural and behavioral plasticity in response to cocaine. *Nat. Commun.* 9: 9.
3. Xie, W., et al. 2019. Clinical significance of LOXL4 expression and features of LOXL4-associated protein-protein interaction network in esophageal squamous cell carcinoma. *Amino Acids* 51: 813-828.
4. Grebenová, D., et al. 2019. PAK1, PAK1Δ15, and PAK2: similarities, differences and mutual interactions. *Sci. Rep.* 9: 17171.
5. Li, Y., et al. 2019. Reversion of tumor hepatocytes to normal hepatocytes during liver tumor regression in an oncogene-expressing transgenic zebrafish model. *Dis. Model. Mech.* 12: dmm039578.
6. Chowdhury, S., et al. 2019. Dissociating orexin-dependent and -independent functions of orexin neurons using novel orexin-flp knock-in mice. *Elife* 8: e44927.
7. Chowdhury, S., et al. 2019. GABA neurons in the ventral tegmental area regulate non-rapid eye movement sleep in mice. *Elife* 8: e44928.
8. Yuan, T., et al. 2020. Temporospatial expression of Fgfr1 and 2 during lung development, homeostasis, and regeneration. *Front. Pharmacol.* 11: 120.
9. Bolus, S., et al. 2020. Dissection of cell death induction by wheat stem rust resistance protein Sr35 and its matching effector AvrSr35. *Mol. Plant Microbe Interact.* 33: 308-319.
10. Das, S., et al. 2020. Genome-scale screening of deubiquitinase subfamily identifies USP3 as a stabilizer of Cdc25A regulating cell cycle in cancer. *Cell Death Differ.* 27: 3004-3020.
11. Williams, K., et al. 2020. Long-lived zebrafish Rohon-Beard cells. *Dev. Biol.* 464: 45-52.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.