

DsRed (L-18): sc-33353

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 nmol to 583 nmol 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., 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.
3. Rodrigues, F., et al. 2001. Red fluorescent protein (DsRed) as a reporter in *Saccharomyces cerevisiae*. *J. Bacteriol.* 12: 3791-3794.
4. Zapata-Hommer, O., et al. 2003. Efficiently folding and circularly permuted variants of the Sapphire mutant of GFP. *BMC Biotechnol.* 3: 5.

SOURCE

DsRed (L-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of DsRed of *Discosoma* sp. origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-33353 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

RESEARCH USE

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

APPLICATIONS

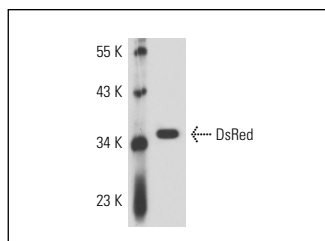
DsRed (L-18) is recommended for detection of proteins containing the DsRed tag by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Molecular Weight of DsRed: 28 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



DsRed (L-18): sc-33353. Western blot analysis of purified recombinant DsRed monomer.

SELECT PRODUCT CITATIONS

1. Gao, Y., et al. 2008. Identification of human cytomegalovirus UL84 virus- and cell-encoded binding partners by using proteomics analysis. *J. Virol.* 82: 96-104.
2. Shukla, D., et al. 2008. Bone marrow stem cells for urologic tissue engineering. *World J. Urol.* 26: 341-349.
3. Bowman, B.J., et al. 2009. Structure and distribution of organelles and cellular location of calcium transporters in *Neurospora crassa*. *Eukaryot. Cell* 8: 1845-1855.
4. Ahn, J., et al. 2009. Generation of expression vectors for high-throughput functional analysis of target genes in *Schizosaccharomyces pombe*. *J. Microbiol.* 47: 789-795.
5. Li, L.H., et al. 2010. P21-activated protein kinase 1 induces colorectal cancer metastasis involving ERK activation and phosphorylation of FAK at Ser-910. *Int. J. Oncol.* 37: 951-962.
6. Fox, D.A., et al. 2011. Gestational lead exposure selectively decreases retinal dopamine amacrine cells and dopamine content in adult mice. *Toxicol. Appl. Pharmacol.* 256: 258-267.

MONOS
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Try **DsRed (E-8): sc-390909**, our highly recommended monoclonal alternative to DsRed (L-18). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **DsRed (E-8): sc-390909**.