SANTA CRUZ BIOTECHNOLOGY, INC.

DsRed (C-20): sc-33354

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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 97: 11984-11989.
3. Rodrigues, F., et al. 2001. Red fluorescent protein (DsRed) as a reporter in *Saccharomyces cerevisiae*. J. Bacteriol. 183: 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 (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of DsRed of *Discosoma* sp. origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-33354 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

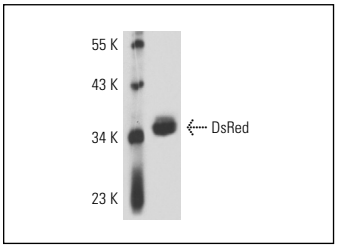
DsRed (C-20) is recommended for detection of proteins containing the DsRed tag by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) 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 (C-20): sc-33354. Western blot analysis of purified recombinant DsRed monomer.

SELECT PRODUCT CITATIONS

1. Heidrych, P., et al. 2008. Rab8b GTPase, a protein transport regulator, is an interacting partner of otoferlin, defective in a human autosomal recessive deafness form. Hum. Mol. Genet. 17: 3814-3821.
2. 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.
3. Bader, A., et al. 2010. Gene switching and odor induced activity shape expression of the OR37 family of olfactory receptor genes. Eur. J. Neurosci. 32: 1813-1824.
4. Alexander, B., et al. 2010. Reversal of depressed behaviors in mice by p11 gene therapy in the nucleus accumbens. Sci. Transl. Med. 2: 54ra76.
5. Shen, Y., et al. 2011. Expressed cell-penetrating peptides can induce a bystander effect, but passage through the secretory pathway reduces protein transduction activity. Mol. Ther. 19: 903-912.
6. Reed, S.A., et al. 2011. Inhibition of IκB kinase α (IKKα) or IKKβ (IKKβ) plus forkhead box O (Foxo) abolishes skeletal muscle atrophy. Biochem. Biophys. Res. Commun. 405: 491-496.