



HcRed (C-20): sc-32190

BACKGROUND

HcRed is a far-red fluorescent protein isolated from *Heteractis crispa*. It is excitable by 600 nm dye laser, thus promoting new detection channels for multi-color flow cytometry applications. HcRed exhibits bright emission at 645 nm. It has been observed to form a dimer, in contrast to the monomeric form of green fluorescent protein (GFP) or the tetrameric forms of the GFP-like proteins (eqFP611, Rtms5 and DsRed). Unlike the well-defined chromophore conformation observed in GFP and the GFP-like proteins, the HcRed chromophore has been observed to be considerably mobile. Within the HcRed structure, the cyclic tripeptide chromophore, Glu 64-Tyr 65-Gly 66, has been observed to adopt both a *cis* coplanar and a *trans* non-coplanar conformation. Within the GFP-like family, it appears that where conformational freedom is permissible, then flexibility in the chromophore conformation is possible.

REFERENCES

1. Gurskaya, N.G., Fradkov, A.F., Tersikh, A., Matz, M.V., Labas, Y.A., Martynov, V.I., Yanushevich, Y.G., Lukyanov, K.A. and Lukyanov, S.A. 2001. GFP-like chromoproteins as a source of far-red fluorescent proteins. *FEBS Lett.* 507: 16-20.
2. Gavin, P., Devenish, R.J. and Prescott, M., 2002. An approach for reducing unwanted oligomerisation of DsRed fusion proteins. *Biochem. Biophys. Res. Commun.* 298: 707-713.
3. Wilmann, P.G., Petersen, J., Pettikiriachchi, A., Buckle, A.M., Smith, S.C., Olsen, S., Perugini, M.A., Devenish, R.J., Prescott, M. and Rossjohn, J. 2005. The 2.1 Å crystal structure of the far-red fluorescent protein HcRed: inherent conformational flexibility of the chromophore. *J. Mol. Biol.* 349: 223-237.

SOURCE

HcRed (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of HcRed of *Heteractis crispa* 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-32190 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

HcRed (C-20) is recommended for detection of proteins containing the HcRed tag by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

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) 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.