

## YFP (F-20): sc-33261

### BACKGROUND

*Vibrio fischeri* is a strain of bioluminescent bacteria found in various niches in marine environments. It lives as a symbiont with some fish and squids that have light-emitting organs. *V. fischeri* cells can produce bioluminescence because of the expression of the lux operon, LuxI, which is used extensively as a marker. The color of the bioluminescence emission of the Luciferase is regulated by the yellow fluorescent protein (YFP), an antenna protein. YFP can form a homodimer and contains two lumazine-binding domains. In normal conditions YFP emits at 485 nM, but at temperatures below 20 degrees Celsius and in the presence of YFP, Luciferase exhibits an emission spectrum at 545 nM, giving a yellow color. *Vibrio logei* is another species of luminous bacteria that gives a similar luminescence to *V. fischeri* and can co-exist with *V. fischeri* in the same species.

### REFERENCES

1. Daubner, S.C., et al. 1987. Yellow light emission of *Vibrio fischeri* strain Y-1: purification and characterization of the energy-accepting yellow fluorescent protein. Proc. Natl. Acad. Sci. USA 84: 8912-8916.
2. Griesbeck, O., et al. 2001. Reducing the environmental sensitivity of yellow fluorescent protein. Mechanism and applications. J. Biol. Chem. 276: 29188-29194.
3. Nagai, T., et al. 2002. A variant of yellow fluorescent protein with fast and efficient maturation for cell-biological applications. Nat. Biotechnol. 20: 87-90.
4. Campbell, R.E., et al. 2002. A monomeric red fluorescent protein. Proc. Natl. Acad. Sci. USA 99: 7877-7882.
5. SWISS-PROT/TrEMBL (P21578). World Wide Web URL: <http://www.expasy.ch/sprot/sprot-top.html>

### SOURCE

YFP (F-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of *Vibrio fischeri* 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-33261 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](http://www.scbt.com) or our catalog for detailed protocols and support products.

### APPLICATIONS

YFP (F-20) is recommended for detection of Yellow Fluorescent Protein of *Vibrio fischeri* origin 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.