Data Sheet (Cat.No.TMPY-04336)

TargetMol

Orange fluorescent protein Protein, Discosoma sp, Recombinant (His)

General Information

Synonyms: OFP Protein

Protein Construction: OFPSparkTM is a red (orange) fluorescent protein derived from DsRed (similarity is 98%). OFPSparkTM was expressed with a polyhistide tag at the C-terminus (Patent 201510003374.3). Predicted N terminal: Met

Species: Discosoma sp

Expression Host: E. coli

Molecular Weight: 26.4 kDa (predicted)

QC Testing

Biological Activity: OFPSparkTM expression vector transfected 293 H cells transiently. After 48 h, the strong orange fluorescent signals can be detected under the excitation channel of 503.5~547.5 nm, and the strong red fluorescent signals can be detected under the excitation channel of 532.5 ~587.5 nm.

Purity: > 95 % as determined by SDS-PAGE

Endotoxin: Please contact us for more information.

Formulation: Lyophilized from a solution filtered through a 0.22 μm filter, containing Tris, pH 8.0.Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

OFPSparkTM is a red (orange) fluorescent protein (excitation/emission maxima are 549 and 566 nm, respectively) derived from DsRed. Possessing high photostability and pH stability, OFPSparkTM is more than twice brighter than mOrange2. Fast OFPSparkTM maturation makes it detectable in mammalian cells as early as within 8 hrs after

transfection. OFPSparkTM can be expressed and detected in a wide range of organisms. Mammalian cells transiently transfected with OFPSparkTM expression vectors produce bright fluorescence in 8 hrs after transfection. No cytotoxic effects or visible protein aggregation are observed. For its monomer structure, OFPSparkTM performs well in some fusions and protein labeling applications.

Reference

Merzlyak, EM ,et al. (2007). Nat Methods, 4 (7): 555-557 / pmid: 17572680
Nathan C. Shaneret al. (2008). Nat Methods, 5 (6): 545-551 / pmid: 18454154