SANTA CRUZ BIOTECHNOLOGY, INC.

OctA-Probe (F-tag-01): sc-51590

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 to aid in the purification and visualization of the target protein. A small hydrophilic peptide of eight amino acids has been engineered into the N-terminus of proteins expressed by a variety of prokaryotic and eukaryotic expression vectors. This small peptide has proven useful in visualization and immunoaffinity purification of expressed fusion proteins, and because of the diminutive size of the peptide moiety and its hydrophilic properties, expressed proteins frequently retain a high level of their biological activity. In addition, the eight amino acid moiety can be removed by cleavage with enterokinase.

REFERENCES

1. Itakura, K., et al. 1977. Expression in *Escherichia coli* of a chemically synthesized gene for the hormone somatostatin. Science 198: 1056-1063.
2. Goeddel, D.V., et al. 1979. Expression in *Escherichia coli* of chemically synthesized genes for human Insulin. Proc. Natl. Acad. Sci. USA 76: 106-110.
3. Maniattis, T., et al. 1982. Molecular Cloning. Cold Spring Harbor, New York: Cold Spring Laboratory.

SOURCE

OctA-Probe (F-tag-01) is a mouse monoclonal antibody raised against OctA (FLAG®)-tagged proteins.

PRODUCT

Each vial contains 100 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

OctA-Probe (F-tag-01) is recommended for detection of OctA (FLAG®)-tagged fusion proteins 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

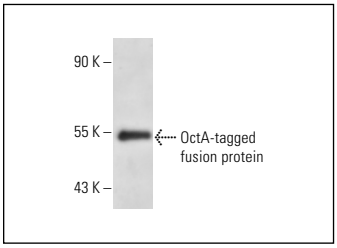
RESEARCH USE

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

STORAGE

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

DATA



OctA-Probe (F-tag-01): sc-51590. Western blot analysis of OctA tagged recombinant fusion protein.

SELECT PRODUCT CITATIONS

1. Wang, J., et al. 2008. Protein interaction data set highlighted with human Ras-MAPK/PI3K signaling pathways. J. Proteome Res. 7: 3879-3889.
2. Zhang, W., et al. 2011. Amelioration of lupus nephritis by serum amyloid P component gene therapy with distinct mechanisms varied from different stage of the disease. PLoS ONE 6: e22659.
3. Smith, S.C., et al. 2014. A gemcitabine sensitivity screen identifies a role for NEK9 in the replication stress response. Nucleic Acids Res. 42: 11517-11527.
4. Rojas, M., et al. 2015. An eIF2α-binding motif in protein phosphatase 1 subunit GADD34 and its viral orthologs is required to promote dephosphorylation of eIF2α. Proc. Natl. Acad. Sci. USA 112: E3466-E3475.
5. Luo, C., et al. 2017. Adipose Angiotensin II type 1 receptor-associated protein ameliorates metabolic disorders via promoting adipose tissue adipogenesis and browning. Eur. J. Cell Biol. 96: 567-578.
6. Wan, W., et al. 2017. mTORC1 phosphorylates acetyltransferase p300 to regulate autophagy and lipogenesis. Mol. Cell 68: 323-335.e6.
7. Li, Y., et al. 2018. PSMD2 regulates breast cancer cell proliferation and cell cycle progression by modulating p21 and p27 proteasomal degradation. Cancer Lett. 430: 109-122.
8. Wan, W., et al. 2018. mTORC1-regulated and HUWE1-mediated WIPI2 degradation controls autophagy flux. Mol. Cell 72: 303-315.e6.
9. Dong, L., et al. 2019. Hsp90 interacts with HMGCR and promotes the progression of hepatocellular carcinoma. Mol. Med. Rep. 19: 524-532.
10. Wu, C., et al. 2020. Poly(A)-binding protein regulates the efficiency of translation termination. Cell Rep. 33: 108399.

CONJUGATES

See **OctA-Probe (H-5): sc-166355** for OctA-Probe antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.