

BACKGROUND

POP (Phytochrome-Originated Peptide) epitope sequence (RDPLPFFPP, CGG GAC CCG TTG CCC TTT TTT CCA CCG) is a part of *Deinococcus radiodurans* Bacteriophytochrome (DrBphP). This monoclonal anti-POP antibody is highly specific to any protein containing minimal original epitope sequence (RDPLPFFPP).

SOURCE

POP epitope is amino acid sequence (3-11) of *Deinococcus radiodurans* bacteriophytochrome (DrBphP, 75kDa). POP(2B8) antibody has been generated by immunizing the purified DrBphP protein into mouse.

APPLICATIONS

POP(2B8) antibody is recommended for detection of RDPLPFFPP or RDPLPAFPP peptide tagged fusion proteins by Western Blot (starting dilution 1:2,500, dilution range 1:2,500~1:20,000), Immunoprecipitation [~5 µg per 100-500 µg of total protein (1 ml of cell lysate)], Solid phase ELISA (dilution range 1:1,000-1:10,000), Immunofluorescence (starting dilution 1:500, dilution range 1:500-1:2,000), Chromatine immunoprecipitation(ChIP).

STORAGE

Store at -20°C. Stable up to one year from the date of shipment. Non-hazardous. No MSDS required.

PRODUCT

Each vial contains 100 µg IgG (monoclonal,HC:IgG2a/LC:κ) in 100 µl of PBS with < 0.1% sodium azide, 30 % glycerol.

* Control protein:

Purified POP tagged GFP protein (~28 kDa). Use 5 µl for Western blot.

SELECT PRODUCT CITATIONS

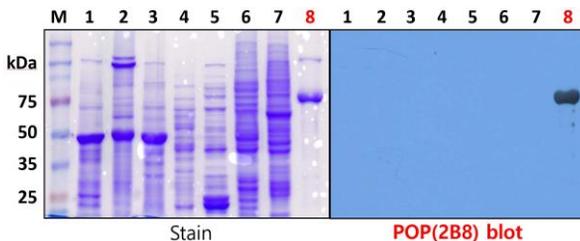
1. J. Lee, Y. Cho, B Y. Choi, H K. Kim, Y. Lee, E. Kim, J. Han, J H. Sul, J-S. Kim, S H, Baek, Y. Choi, J. Park, G. Bahn, H-G. Bae, J H. Jun, M K P. Lai, T V. Arumugam, D-G. Jo (2026) HDAC6 regulates BACE1 stability and NLRP3 inflammasome activation in Alzheimer's disease. **Brain**. Online Article.

2. H J. Jung, S W. Choi, K-H. Boo, J-E. Kim, Y K. Oh, M K. Han, M Y. Ryu, C W. Lee, C. Moller, P. Shah, G M. Kim, W. Yang, S K. Cho, SW. Yang (2022) HYL1-CLEAVAGE SUBTILASE 1 (HCS1) suppresses miRNA biogenesis in response to light-to-dark transition. **PNAS**. 119(6): e2116757119.

3. Yang Y, Hwang H, Im JE, Lee K, Bhoo SH, Yoo JS, Kim YH, Kim JY (2021) Flashlight into the Function of Unannotated C11orf52 using Affinity Purification Mass Spectrometry. **Proteome Res**. 20:5340-5346.

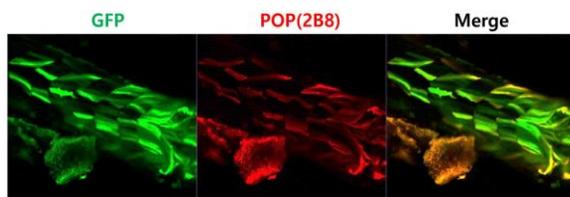
4. Choi HR, Kim TL, Cho MH, Bhoo SH (2017) Immunoaffinity purification of 2B8-tagged proteins. **Appl. Biol. Chem**. 60(5): 563-568.

Product Research Data

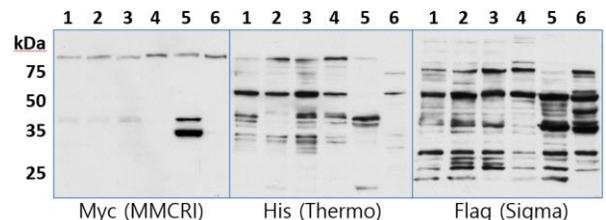
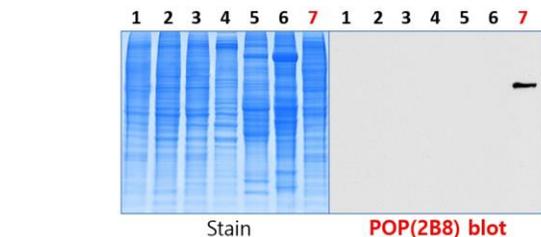


Specificity test of POP(2B8) Ab to total proteins of various organisms.

Coomassie blue staining(left) and Western blotting(right) analysis against various model organisms. 1 : Rice; 2 : *Nicotiana benthamiana*; 3 : *Arabidopsis thaliana*; 4 : *Saccharomyces cerevisiae*; 5 : *E.coli*; 6 : *Drosophila melanogaster* S2; 7 : Pre-B cell PD36; 8 : Purified DrBphP(control). POP(2B8) Ab has no non-specific immune response to total proteins of tested organisms.



Immunofluorescence image showing mosaic *ubb:POP(2B8)-EGFP* expression in the trunk of a 4-dpf zebrafish larva. (Courtesy of Dr. Shin, Univ. of Pittsburgh).



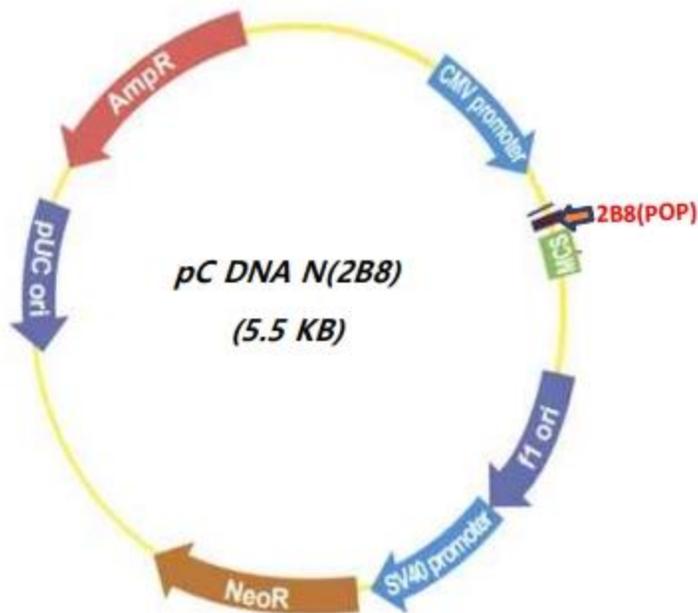
Specificity test of POP(2B8) Ab to total proteins of various human cell lines.

1 : HEK-293(Human kidney) 2 : HepG2(Human liver)
3 : C33A(Human cervix) 4 : CRL-2302(Human eye) 5 : Human hepatocyte 6 : Mouse-hepatocyte 7 : POP(2B8)-Sox9 expressed HEK-293 lysate.

POP(2B8) Ab has no non-specific immune response to total proteins of tested human cell lines.

2B8(POP) tagging pC DNA vector for mammalian cell expression (BioJne Cat. #: BJV-pDN)

- Vector name: **pC DNA N(2B8)**
- Tag: 2B8(POP) **RDPLPFFPP (CGC GAC CCG TTG CCC TTT TTT CCA CCG)**
- Tagging site: **N-terminal**
- Target gene cloning site: In between *Kpn I* and *Apa I* (Match the codon frame)



pC DNA N(2B8)

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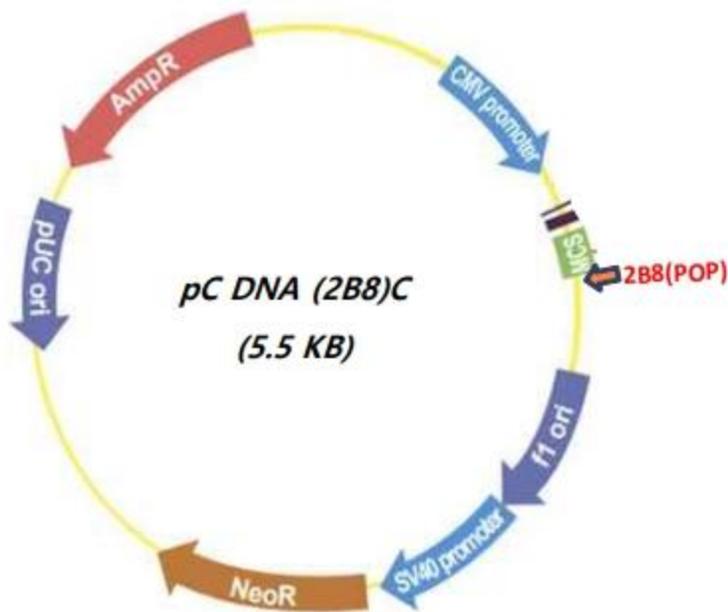
--GG CTA GCG TTT AAA CTT AAG CTT GCC ACC ATG CGC GAC CCG TTG CCC TTT TTT
      Nhe I           Afl II      Hind III  Kozak seq  M  R  D  P  L  P  F  F
                                     2B8(POP) tag

CCA CCG GGT ACC GAG GGA TCC GAA TTC TGC AGA TAT CCA TGG CGG CCG CTC GAG
  P      P      Kpn I   BamH I  EcoR I   EcoR V   Not I
                                     Xho I

TCT AGA GGG CCC GTT TAA --
Xba I   Apa I   Stop
    
```

2B8(POP) tagging pC DNA vector for mammalian cell expression (BioJne Cat. #: BJV-pDC)

- Vector name: **pC DNA (2B8)C**
- Tag: 2B8(POP) **RDPLPFFPPS** (CGC GAC CCG TTG CCC TTT TTT CCA CCG TCC)
- Tagging site: **C-terminal**
- Target gene cloning site: In between *Afl II* and *EcoR V* (Match the codon frame)



pC DNA (2B8)C

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----- TGG CTA GCG TTT AAA GCC ACC CTT AAG CTT GGT ACC GAG GGA TCC GAA TTC
           Nhe I           Kozak seq   Afl II           Kpn I           BamH I   EcoR I
                                     2B8(POP) tag
TGC AGA TAT CCA CGC GAC CCG TTG CCC TTT TTT CCA CCG TCC TAA CTC GAG
           EcoR V           R   D   P   L   P   F   F   P   P   S   Stop   Xho I

TCT AGA GGG CCC GTT TAA -----
           Xba I   Apa I           Stop
    
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