

**AP05110PU-N****Polyclonal Antibody to Farnesyl - Purified**

<b>Quantity:</b>	0.1 mg
<b>Concentration:</b>	1.0 mg/ml
<b>Background:</b>	Protein isoprenylation is a post-translational modification that affects about 0.5% of cellular proteins and is essential for the biological activity of proteins. Two enzymes catalyze the attachment of two prenyl groups to the sulfhydryl group of carboxyl-terminal cysteine groups. Proteins which are prenylated by these enzymes have a distinct motif at the C-terminal of the protein, C-A1-A2-X (C = Cysteine, A1 & A2 = aliphatic amino acids). The two enzymes involved in this transfer are farnesyltransferase and geranylgeranyltransferase. These transfer a 15 carbon farnesyl or a 20 carbon geranylgeranyl, respectively, from a prenyl-pyrophosphate to the protein. Examples of proteins containing this C-A-A-X motif are members of the Ras small G protein family, the nuclear lamins and the gamma subunit of trimeric G proteins. Prenylation of proteins is necessary for membrane association of proteins as well as protein-protein interactions and the nature of the linked isoprenyl group can influence the protein interactions, such as the interaction between G proteins and receptors.
<b>Host / Isotype:</b>	Rabbit / IgG
<b>Immunogen:</b>	Antibody developed using Farnesyl cysteine conjugated to KLH.
<b>Format:</b>	<b>State:</b> Liquid purified Ig fraction. <b>Purification:</b> Ammonium Sulfate Precipitation <b>Buffer System:</b> Phosphate buffered saline with 0.08% Sodium Azide
<b>Applications:</b>	<b>ELISA:</b> Detects farnesyl motif derived from isoprenylated C-A-A-X sequence. Also cross-reacts with geranylgeranyl motif. Detects KLH as well. <b>Immunofluorescence</b> Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.
<b>Specificity:</b>	This antibody recognizes Farnesyl.
<b>Storage:</b>	Upon receipt, store undiluted (in aliquots) at -20°C. Avoid repeated freezing and thawing. Shelf life: one year from despatch.
<b>Product Citations:</b>	<b>Originator or purchased from resellers:</b> 1. Clase AC, Lyman MG, del Rio T, Randall JA, Calton CM, Enquist LW, et al. The pseudorabies virus Us2 protein, a virion tegument component, is prenylated in infected cells. <i>J Virol.</i> 2003 Nov;77(22):12285-98. PubMed PMID: 14581565.
<b>General Readings:</b>	1. Baron R, Fourcade E, Lajoie-Mazenc I, Allal C, Couderc B, Barbaras R, et al. RhoB prenylation is driven by the three carboxyl-terminal amino acids of the protein: evidenced in vivo by an anti-farnesyl cysteine antibody. <i>Proc Natl Acad Sci U S A.</i> 2000 Oct 10;97(21):11626-31. PubMed PMID: 11027361. 2. Lin HP, Hsu SC, Wu JC, Sheen IJ, Yan BS, Syu WJ. Localization of isoprenylated antigen of hepatitis delta virus by anti-farnesyl antibodies. <i>J Gen Virol.</i> 1999 Jan;80 (

Pt 1):91-6. PubMed PMID: 9934689.

3. Aspbury RA, Prescott MC, Fisher MJ, Rees HH. Isoprenylation of polypeptides in the nematode *Caenorhabditis elegans*. *Biochim Biophys Acta*. 1998 Jun 15;1392(2-3):265-75. PubMed PMID: 9630668.

4. Zhang FL, Casey PJ. Protein prenylation: molecular mechanisms and functional consequences. *Annu Rev Biochem*. 1996;65:241-69. PubMed PMID: 8811180.

5. Gromov PS, Madsen P, Celis JE. Identification of isoprenyl modified proteins metabolically labeled with [ $^3\text{H}$ ]farnesyl- and [ $^3\text{H}$ ]geranylgeranyl-pyrophosphate. *Electrophoresis*. 1996 Nov;17(11):1728-33. PubMed PMID: 8982605.

#### Pictures:

Immunofluorescence assay using anti-Farnesyl antibody on plasmids encoding isoprenylated protein and visualized using FITC-conjugated goat anti-rabbit antibody.

