

# Recombinant Human Regenerating Islet-derived 3 Alpha, His-tagged

Cat. No. REG3A-173H Lot. No. (See product label)

## SPECIFICATION

### Product Overview

The Recombinant Human regenerating islet-derived 3 alpha(His-tagged) protein produced in *E.coli* contains 149 amino acids and has a molecular mass of 18.4 kDa.

### Species

Human

### Source

*E.coli*

### Description

Pancreatitis-associated protein (PAP) is a secretory protein not normally expressed in healthy pancreas but highly induced during acute pancreatitis. While PAP has been shown to be anti-bacterial and antiapoptotic in vitro, its definitive biological function in vivo is not clear. Using antisense oligonucleotides, inhibition of PAP expression significantly worsened pancreatitis in a rat model. During pancreatitis, PAP released by the pancreas could mediate lung inflammation PAP is activated in primary liver cancers. In normal liver, the protein is undetectable in normal mature hepatocytes and found only in some ductular cells, representing potential hepatic progenitor cells. PAP can be considered hepatic cytokine that combines mitogenic and anti-apoptotic functions regarding hepatocytes, and consequently acts as a growth factor in vivo to enhance liver regeneration. In pancreatic cancer, PAP was overexpressed in 79% (30 of 38) of pancreatic ductal adenocarcinoma, 19% (7 of 36) of chronic pancreatitis, and 29% (2 of 7) of mucinous cystadenoma.

### Sequences Of Amino Acids

MRGSHHHHHH GMASHMEEPQ RELPSARIRC PKGSKAYGSH CYALFLSPKS  
WTDADLACQK RPSGNLVSVL SGAEGSFVSS LVKSIGNSYS YVWIGLHDPT

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QGTEPNGEGW EWSSSDVMNY FAWERNPSTI SSPGHCASLS RSTAFLRWKD  
YNCNVRLPYV CKFTD.

<b>Physical Appearance</b>	Sterile Filtered White lyophilized (freeze-dried) powder.
<b>Formulation</b>	Sterile filtered and lyophilized from 0.5 mg/ml in 0.05M Acetate buffer pH-4.
<b>Specificity</b>	The amino acid sequence of the recombinant Human PAP-1 is 100% homologous to the amino acid sequence of the Human PAP-1 without signal sequence.
<b>Purification Method</b>	One-step procedure using affinity Ni-NTA chromatography.
<b>Purity</b>	Greater than 95.0% as determined by SDS-PAGE.
<b>Solubility</b>	Add 0.2 ml of 0.1M Acetate buffer pH-4 and let the lyophilized pellet dissolve completely. For conversion into higher pH value, we recommend intensive dilution by relevant buffer to a concentration of 10µg/ml. In higher concentrations the solubility of this antigen is limited.
<b>Applications</b>	Western blotting, ELISA.
<b>Stability</b>	Store lyophilized protein at -20°C. Aliquot the product after reconstitution to avoid repeated freezing/thawing cycles. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after two weeks at 4°C. The lyophilized protein remains stable until the expiry date when stored at -20°C.

## GENE INFORMATION

<b>Gene Name</b>	REG3A regenerating islet-derived 3 alpha [ Homo sapiens ]
<b>Synonyms</b>	HIP; PAP; PAP1; REG3; PAP-H; PBCGF; REG-III; REG3A; pancreatitis-associated

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protein; PAP homologous protein; proliferation-inducing protein 34; proliferation-inducing protein 42; hepatocarcinoma-intestine-pancreas; pancreatic beta cell growth factor; Regenerating islet-derived protein 3 alpha; Reg III-alpha; Pancreatitis-associated protein 1

**Gene ID** 5068

**mRNA Refseq** NM\_002580

**Protein Refseq** NP\_002571

**MIM** 167805

**UniProt ID** Q06141

**Chromosome Location** 2p12

**Function** Binding; sugar binding

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