SunLong Biotech Co.,LTD
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Rabbit Anti-Mafa antibody

SL0924R

Product Name	Mafa
Chinese Name	v-maf 肌腱膜纤维肉瘤癌基因同源物 A 抗体
Alias	Mafa homolog; V-maf musculoaponeurotic fibrosarcoma oncogene homolog A; Pancreatic beta-cell-specific transcriptional activator; (avian)(V-maf musculoaponeurotic fibrosarcoma oncogene homolog A; MAFA_MOUSE.
Research Area	Neurobiology Signal transduction transcriptional regulatory factor Diabetes Endocrinopathy
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Rat, (predicted: Human, Mouse,)
Applications	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500 （Paraffin sections need antigen repair） not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Theoretical molecular weight	37kDa
Cellular localization	The nucleus
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from mouse Mafa: 265-359/359
Lsotype	IgG
Purification	affinity purified by Protein A
Buffer Solution	1M TBS(pH7.4) with 1% BSA, 3% Proclin300 and 50% Glycerol.
Storage	Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles.
Attention	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
PubMed	PubMed

Insulin gene expression is regulated by several islet-enriched transcription factors. However, MAFA is the only beta cell-specific activator. MAFA selectively induces endogenous insulin transcription in non-beta cells. MAFA was also first detected in the insulin-producing cells formed during the second and predominant phase of beta cell differentiation, and absent in the few insulin-positive cells found in Nkx6.1(-/-) pancreata, which lack the majority of second-phase beta cells. These results demonstrate that MAFA is a potent insulin activator that is likely to function downstream of Nkx6.1 during islet insulin-producing cell development.

Function:
Acts as a transcriptional factor. Specifically binds the insulin enhancer element RIPE3b. Cooperates synergistically with NEUROD1 and PDX1. Phosphorylation by GSK3 increases its transcriptional activity and is required for its oncogenic activity. Regulates the insulin gene transcription. Involved either as an oncogene or as a tumor suppressor, depending on the cell context.

Subunit:
Binds DNA as a homodimer. Interacts with PCAF. Interacts with NEUROD1 and PDX1.

Subcellular Location:

Product Detail

Nucleus. Note=Detected in nuclei of pancreas islet beta cells.

Tissue Specificity:
Selectively expressed in pancreatic beta but not in alpha cells (at protein level). Expressed in eyes and at low levels in thymus. Expressed in brain, lung, spleen and kidney. Expressed in embryo.

Post-translational modifications:
Ubiquitinated, leading to its degradation by the proteasome.
Phosphorylation by GSK3 requires prior phosphorylation of Ser-65 by another kinase. Phosphorylation proceeds then from Ser-61 to Thr-57, Thr-53 and Ser-49. GSK3-mediated phosphorylation increases its transcriptional activity through the recruitment of the coactivator PCAF, is required for its transforming activity and leads to its degradation through an ubiquitin/proteasome-dependent pathway. Ser-14 and Ser-65 appear to be the major phosphorylation sites. Phosphorylated by MAPK13 on serine and threonine residues (Probable).

Similarity:
Belongs to the bZIP family. Maf subfamily.
Contains 1 bZIP (basic-leucine zipper) domain.

SWISS:
Q8CF90

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Gene ID:
378435

Database links:

Entrez Gene: 389692 Human

Entrez Gene: 378435 Mouse

Entrez Gene: 366949 Rat

Omim: 610303 Human

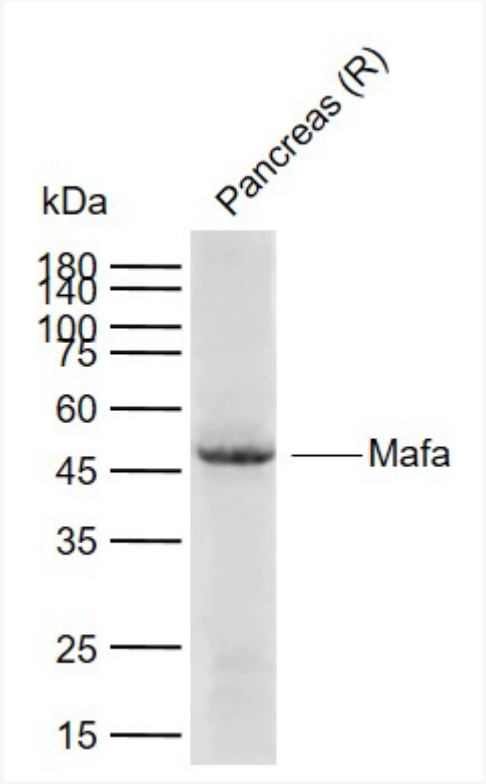
SwissProt: Q8NHW3 Human

SwissProt: Q8CF90 Mouse

Unigene: 521914 Human

Unigene: 309589 Mouse

Product Picture



Sample:

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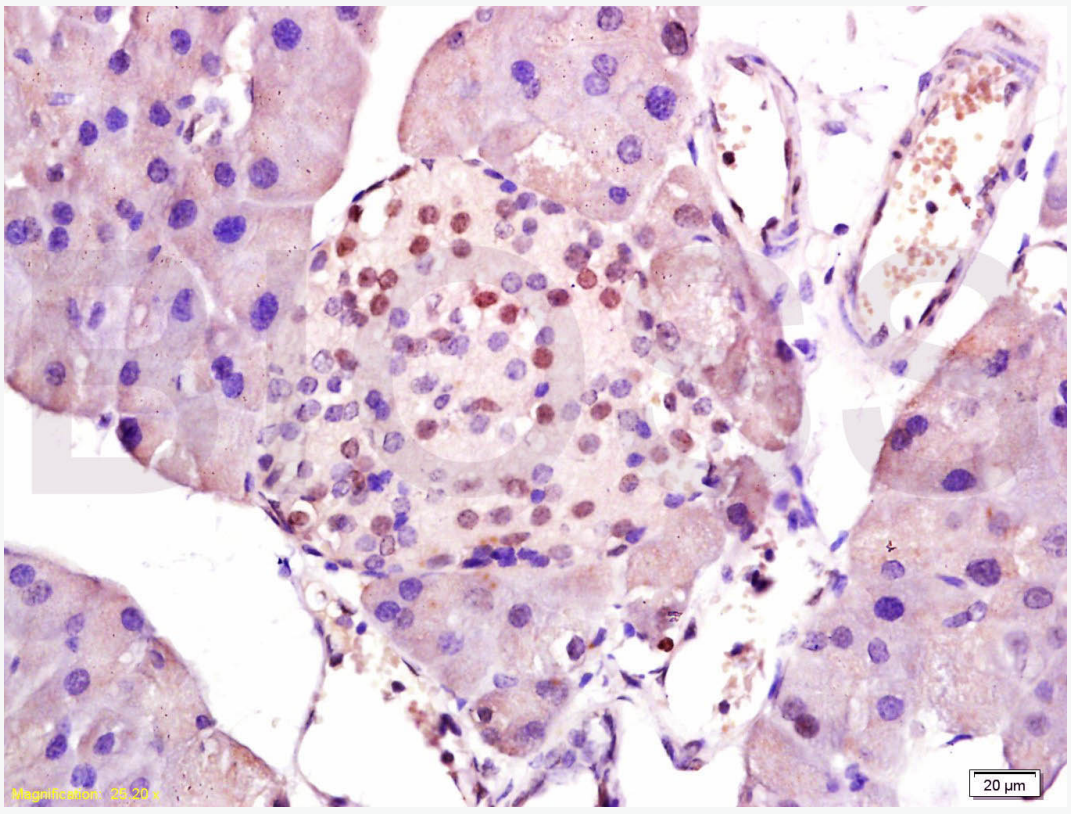
Lane 1: Rat Pancreas tissue lysates

Primary: Anti- Mafa (SL0924R) at 1/1000 dilution

Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution

Predicted band size: 37 kDa

Observed band size: 47 kDa



Tissue/cell: rat pancreas tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer

(normal goat serum,C-0005) at 37℃ for 20 min;

Incubation: Anti-Mafa Polyclonal Antibody, Unconjugated(SL0924R) 1:400, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining