胰岛素促进因子/胰十二指肠同源异型盒蛋白抗体

产品货号： mlR20738

英文名称： PDX1

中文名称： 胰岛素促进因子/胰十二指肠同源异型盒蛋白抗体

别　　名： Glucose sensitive factor; Glucose-sensitive factor; GSF; IDX 1; IDX-1; IDX1; Insulin promoter factor 1; insulin promoter factor 1 homeodomain transcription factor; insulin upstream factor 1; IPF 1; IPF-1; IPF1; Islet/duodenum homeobox 1; Islet/duodenum homeobox-1; IUF 1; IUF-1; IUF1; MODY4; Pancreas/duodenum homeobox 1; Pancreas/duodenum homeobox protein 1; pancreatic and duodenal homeobox P; PDX 1; PDX-1; PDX1; PDX1_HUMAN; Somatostatin transactivating factor 1; Somatostatin-transactivating factor 1; STF 1; STF-1; STF1.

研究领域： 细胞生物　神经生物学　生长因子和激素　转录调节因子　内分泌病

抗体来源： Rabbit

克隆类型： Polyclonal

交叉反应： Human, Mouse, Rat, Chicken, Dog, Pig, Cow, Horse, Rabbit, Sheep,

产品应用： Flow-Cyt=1μg/Test

not yet tested in other applications.

optimal dilutions/concentrations should be determined by the end user.

分 子 量： 30kDa

细胞定位： 细胞核

性　　状： Lyophilized or Liquid

浓　　度： 1mg/ml

免 疫 原： KLH conjugated synthetic peptide derived from human PDX1:101-200/284

亚　　型： IgG

纯化方法： affinity purified by Protein A

储 存 液： 0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.

保存条件： Store at -20 ° C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20° C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 ° C.

PubMed : PubMed

产品介绍 : The protein encoded by this gene is a transcriptional activator of several genes, including insulin, somatostatin, glucokinase, islet amyloid polypeptide, and glucose transporter type 2. The encoded nuclear protein is involved in the early development of the pancreas and plays a major role in glucose-dependent regulation of insulin gene expression. Defects in this gene are a cause of pancreatic agenesis, which can lead to early-onset insulin-dependent diabetes mellitus (IDDM), as well as maturity onset diabetes of the young type 4 (MODY4). [provided by RefSeq, Aug 2017]

Function:

Activates insulin, somatostatin, glucokinase, islet amyloid polypeptide and glucose transporter type 2 gene transcription. Particularly involved in glucose-dependent regulation of insulin gene transcription. Binds preferentially the DNA motif 5'-[CT]TAAT[TG]-3'. During development, specifies the early pancreatic epithelium, permitting its proliferation, branching and subsequent differentiation. At adult stage, required for maintaining the hormone-producing phenotype of the beta-cell.

Subunit:

Interacts with the basic helix-loop-helix domains of TCF3(E47) and NEUROD1 and with HMG-I(Y). Interacts with SPOP. Interacts with the methyltransferase SETD7.

Subcellular Location:

Nucleus.

Tissue Specificity:

Duodenum and pancreas (Langerhans islet beta cells and small subsets of endocrine non-beta-cells, at low levels in acinar cells).

Post-translational modifications:

Phosphorylated by the SAPK2 pathway at high intracellular glucose concentration.

DISEASE:

Defects in PDX1 are a cause of pancreatic agenesis (PAC)[MIM:260370]. This autosomal recessive disorder is characterized by absence or hypoplasia of pancreas, leading to early-onset insulin-dependent diabetes mellitus. This was found in a frameshift mutation that produces a truncated protein and results in a second initiation that produces a second protein that act as a dominant negative mutant.

Defects in PDX1 are a cause of non-insulin-dependent diabetes mellitus (NIDDM) [MIM:125853]; also known as diabetes mellitus type 2. NIDDM is characterized by an autosomal dominant mode of inheritance, onset during adulthood and insulin resistance.

Defects in PDX1 are the cause of maturity-onset diabetes of the young type 4 (MODY4) [MIM:606392]; also symbolized MODY-4. MODY is a form of diabetes that is characterized by an autosomal dominant mode of inheritance, onset in childhood or early adulthood (usually before 25 years of age), a primary defect in insulin secretion and frequent insulin-independence at the beginning of the disease.

Similarity:

Belongs to the Antp homeobox family. IPF1/XlHbox-8 subfamily.

Contains 1 homeobox DNA-binding domain.

SWISS:

P52945

Gene ID:

3651

Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

PDX1 是一种同源框转录因子-即胰十二指肠同源异型盒基因，又称 IPF-1(胰岛素促进因子)、IDX-1、IUF-1。

近年来，科学家们对 PDX1 从不同的角度进行了卓有成效的研究。有学者认为；PDX1 是胰腺发育及胰岛素基因转录表达的关键性转录因子，即决定于胰腺前体细胞向 B、A、D 细胞的分化。

还有学者认为：PDX1 对于肠内胚层背胰芽和腹胰芽的生长、分化起重要作用，早期胰腺表达的 PDX-1 对胰腺上皮的形成和分化是必需的。

产品图片