



Rabbit Anti-Catalase antibody

SL2302R

Product Name:	Catalase
Chinese Name:	过氧化氢酶抗体
Alias:	Cas1; CAT; Cs1; MGC138422; MGC138424.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Pig,
Applications:	ELISA=1:500-1000IHC-F=1:400-800IF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	58kDa
Cellular localization:	cytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	Full length plasma protein from pig:
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	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
Product Detail:	<p>Catalase is the classical marker for peroxisomes and is the most abundant protein within peroxisomes. It is found in almost all aerobically respiring organisms and serves to protect cells from the toxic effects of hydrogen peroxide.</p> <p>Function: Occurs in almost all aerobically respiring organisms and serves to protect cells from the toxic effects of hydrogen peroxide. Promotes growth of cells including T-cells, B-cells,</p>

myeloid leukemia cells, melanoma cells, mastocytoma cells and normal and transformed fibroblast cells.

Subunit:

Homotetramer.

Subcellular Location:

Peroxisome.

Post-translational modifications:

The N-terminus is blocked.

DISEASE:

Defects in CAT are the cause of acatalasemia (ACATLAS) [MIM:614097]. A metabolic disorder characterized by absence of catalase activity in red cells and is often associated with ulcerating oral lesions.

Similarity:

Belongs to the catalase family.

SWISS:

O62839

Gene ID:

397568

Database links:

[Entrez Gene: 847](#)Human

[Entrez Gene: 12359](#)Mouse

[Entrez Gene: 24248](#)Rat

[Omim: 115500](#)Human

[SwissProt: P04040](#)Human

[SwissProt: P24270](#)Mouse

[SwissProt: P04762](#)Rat

[Unigene: 502302](#)Human

[Unigene: 4215](#)Mouse

[Unigene: 3001](#)Rat

Important Note:

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

过氧化氢酶是催化过氧化氢分解成氧和水的酶，存在于细胞的过氧化物体内。过氧化氢酶是过氧化物酶体的标志酶，

约占过氧化物酶体酶总量的40%。过氧化氢酶存在于所有已知的动物的各个组织中，特别在肝脏中以高浓度存在。过氧化氢酶在食品工业中被用于除去用于制造奶酪的牛奶中的过氧化氢。过氧化氢酶也被用于食品包装，防止食物被氧化。

????过氧化氢酶(CAT)是一种酶类清除剂，又称为触酶，是以铁卟啉为辅基的结合酶。它可促使H₂O₂分解为分子氧和水，清除体内的过氧化氢，从而使细胞免于遭受H₂O₂的毒害，是生物防御体系的关键酶之一。CAT作用于过氧化氢的机理实质上是H₂O₂的歧化，必须有两个H₂O₂先后与CAT相遇且碰撞在活性中心上，才能发生反应。H₂O₂浓度越高，分解速度越快。

????几乎所有的生物机体都存在过氧化氢酶。其普遍存在于能呼吸的生物体内，主要存在于Botany的叶绿体、Mitochondrion、内质网、动物的肝和红细胞中，其酶促活性为机体提供了抗氧化防御机理。

CAT是红血素酶，不同的来源有不同的结构。在不同的组织中其活性水平高低不同。过氧化氢在肝脏中分解速度比在脑或心脏等器官快，就是因为肝中的CAT含水量高。

????过氧化氢酶在食品工业中被用于除去用于制造奶酪的牛奶中的过氧化氢。过氧化氢酶也被用于食品包装，防止食物被氧化。在纺织工业中，过氧化氢酶被用于除去纺织物上的过氧化氢，以保证成品是不含过氧化物的。它还被用在隐形眼镜的清洁上：眼镜在含有过氧化氢的清洁剂中浸泡后，使用前再用过氧化氢酶除去残留的过氧化氢。近年来，过氧化氢酶开始使用在美容业中。一些面部护理中加入了该酶和过氧化氢，目的是增加表皮上层的细胞氧量。