SunLong Biotech Co.,LTD
Tel: 0086-571-56623320 Fax:0086-571-56623318
E-mail:sales@sunlongbiotech.com
www.sunlongbiotech.com

Rabbit Anti-RAGE/PE Conjugated antibody

SL0177R-PE

Product Name	Anti-RAGE/PE
Chinese Name	PE 标记的晚期糖基化终末产物特异性受体抗体
Alias	Advanced glycosylation end product specific receptor; Advanced glycosylation end product-specific receptor; AGER; EC 2.7.11.22; LE 9211 A antigen;LE-9211-A antigen; MGC22357; MOK; RAGE 1; RAGE1; MOK protein kinase; Receptor for advanced glycation endproducts;Renal tumor antigen 1; Renal tumor antigen; Renal cell carcinoma antigen (MOK protein kinase); Renal tumor antigen 1; RAGE_HUMAN.
Research Area	Tumour Cardiovascular immunology Growth factors and hormones Diabetes Endocrinopathy
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human,Mouse,Rat
Applications	Flow-Cyt=1μg /test,IF=1:100-500 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	42kDa
Cellular localization	The cell membrane
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from rat AGER
Lsotype	IgG
Purification	affinity purified by Protein A
Storage Buffer	1M TBS(pH7.4) with 1% BSA, 3% 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 1M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
Product Detail	**background:**

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Advanced glycosylation end product-specific receptor (AGER; RAGE) is a member of the immunoglobulin superfamily of cell surface molecules that binds molecules that have been irreversibly modified by non-enzymatic glycation and oxidation, and are know as advanced glycation end products (AGEs). It is expressed by endothelium, mononuclear phagocytes, neurons and smooth muscle cells. Whereas RAGE is present at high levels during development, especially in the central nervous system, its levels decline during maturity.The increased expression of RAGE is associated with several pathological states, such as diabetic vasculopathy, neuropathy, retinopathy and other disorders, including Alzheimer's disease and immune/inflammatory reactions of the vessel walls. In diabetic tissues, the production of RAGE is due to the overproduction of AGEs that eventually overwhelm the protective properties of RAGE. This results in oxidative stress and endothelial cell dysfunction that leads to vascular disease in diabetics. In the brain, RAGE also binds amyloid beta (Ab). Because Ab is overproduced in neurons and vessels in the brains of Alzheimer disease, this leads to the hyperstimulation of RAGE. The RAGE-Ab interaction is thought to result in oxidative stress leading to neuronal degeneration.

Function:
Mediates interactions of advanced glycosylation end products (AGE). These are nonenzymatically glycosylated proteins which accumulate in vascular tissue in aging and at an accelerated rate in diabetes. Acts as a mediator of both acute and chronic vascular inflammation in conditions such as atherosclerosis and in particular as a complication of diabetes. AGE/RAGE signaling plays an important role in regulating the production/expression of TNF-alpha, oxidative stress, and endothelial dysfunction in type 2 diabetes. Interaction with S100A12 on endothelium, mononuclear phagocytes, and lymphocytes triggers cellular activation, with generation of key proinflammatory mediators. Receptor for amyloid beta peptide. Contributes to the translocation of amyloid-beta peptide (ABPP) across the cell membrane from the extracellular to the intracellular space in cortical neurons. ABPP-initiated RAGE signaling, especially stimulation of p38 mitogen-activated protein kinase (MAPK), has the capacity to drive a transport system delivering ABPP as a complex with RAGE to the intraneuronal space. Interaction with S100B after myocardial infarction may play a role in myocyte apoptosis by activating ERK1/2 and p53/TP53 signaling.

Subunit:
Interacts with S100B, S100A1 and APP. Interacts with S100A12.

Subcellular Location:
Isoform 1: Cell membrane; Single-pass type I membrane protein.
Isoform 2: Secreted.

Tissue Specificity:
Endothelial cells and cardiomyocytes.

Similarity:
Contains 2 Ig-like C2-type (immunoglobulin-like) domains.
Contains 1 Ig-like V-type (immunoglobulin-like) domain.

Database links:

Entrez Gene: 177 Human

Entrez Gene: 11596 Mouse

Entrez Gene: 81722 Rat

Omim: 600214 Human

SwissProt: Q15109 Human

SwissProt: Q62151 Mouse

SwissProt: Q63495 Rat

Unigene: 534342 Human

Unigene: 3383 Mouse

Unigene: 9829 Rat

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

晚期糖基化终末产物受体(AGER)与其配体 AGEs 形成的 AGEs-AGER 系统在 Diabetes 血管病变的发生、发展过程中起着重要作用.
年龄及晚期糖基化终末产物（AGEs）等多种因素均能调节 AGER 基因的表达. Diabetes 患者体内晚期糖基化终末产物受体（AGER）的高表达加速了病人血管病变的发展过程,并增加了病变的复杂性.阻断 AGER 通路可缓解 Diabetes 血管的病变过程。
因此,AGER 可以作为治疗 Diabetes 血管病变的药物靶点,并为临床治疗 Diabetes 血管病变提供了新的思路.

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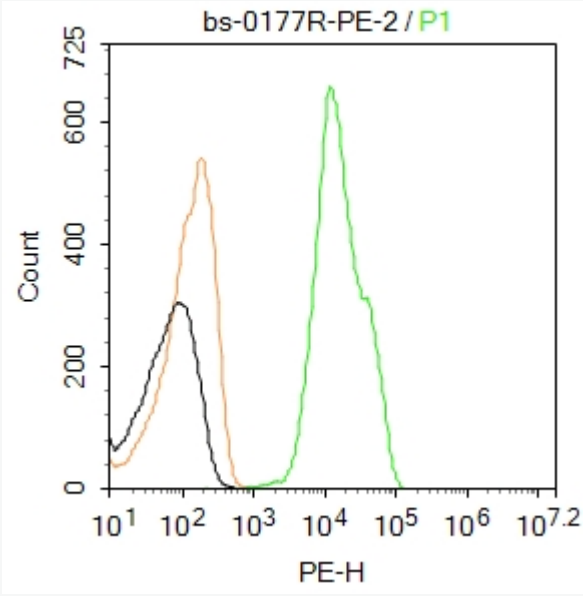
Product Picture



Blank control:MCF7.

Primary Antibody (green line): Rabbit Anti-RAGE antibody (SL0177R-PE)

Dilution: 2μg /10^6 cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 0.1% PBST for 20 min at room temperature. The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. Acquisition of 20,000 events was performed.

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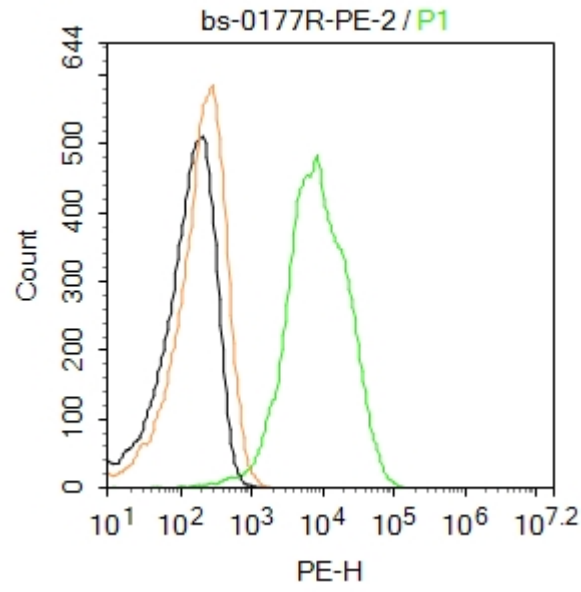

Blank control:U87MG.

Primary Antibody (green line): Rabbit Anti-RAGE antibody (SL0177R-PE)

Dilution: 2μg /10^6 cells;

Isotype Control Antibody (orange line): Rabbit IgG .

Protocol

The cells were fixed with 4% PFA (10min at room temperature)and then permeabilized with 0.1% PBST for 20 min at room temperature. The cells were then incubated in 5%BSA to block non-specific protein-protein interactions for 30 min at room temperature .Cells stained with Primary Antibody for 30 min at room temperature. Acquisition of 20,000 events was performed.