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

Rabbit Anti-phospho-ADRB2 (Ser346)/AP Conjugated antibody

SL3002R-AP

Product Name	Anti-phospho-ADRB2 (Ser346)/AP
Chinese Name	碱性磷酸酶（AP）标记的磷酸化肾上腺素能受体 β2 抗体
Alias	β2-adrenergic receptor; ADRB2; ADRB2R; ADRBR; Adrenergic beta 2 receptor surface; B2AR; BAR; beta 2 adrenoceptor; Beta 2 adrenoreceptor; BETA2AR; Catecholamine receptor; beta2-adrenergic receptor; ADRB2_HUMAN.
Product Type	Phosphorylated anti
Research Area	Neurobiology The cell membrane 受体 Endocrinopathy
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human,Rat(predicted:Mouse,Dog,Horse,Sheep)
Applications	IHC-P=1:50-200 IHC-F=1:50-200 not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight	46kDa
Form	Lyophilized or Liquid
Concentration	1mg/ml
immunogen	KLH conjugated Synthesised phosphopeptide derived from human ADRB2 around the phosphorylation site of Ser346
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:** Beta 2 Adrenergic Receptor is a member of the G protein coupled receptor

superfamily. This receptor is directly associated with one of its ultimate effectors, the class C L type calcium channel Ca(V)1.2. This receptor channel complex also contains a G protein, an adenylyl cyclase, cAMP dependent kinase, and the counterbalancing phosphatase, PP2A. The assembly of the signaling complex provides a mechanism that ensures specific and rapid signaling by this G protein coupled receptor. This gene contains no introns in either its coding or untranslated sequences. Different polymorphic forms, point mutations, and/or downregulation of this gene are associated with nocturnal asthma, obesity and type 2 diabetes. Expression of the beta 2 Adrenergic Receptor has been reported in adipose, blood, brain, heart, lung, nose, pancreas, skeletal muscle, skin, and vessel.

Function:
Beta-adrenergic receptors mediate the catecholamine-induced activation of adenylate cyclase through the action of G proteins. The beta-2-adrenergic receptor binds epinephrine with an approximately 30-fold greater affinity than it does norepinephrine.

Subunit:
Binds SLC9A3R1 and GPRASP1. Interacts with ARRB1 and ARRB2. Interacts with SRC, USP20 and USP33. Interacts with VHL; the interaction, which is increased on hydroxylation of ADRB2, ubiquitinates ADRB2 leading to its degradation. Interacts with EGLN3; the interaction hydroxylates ADRB2 facilitating VHL-E3 ligase-mediated ubiquitination.

Subcellular Location:
Cell membrane; Multi-pass membrane protein.

Post-translational modifications:
Palmitoylated; may reduce accessibility of Ser-345 and Ser-346 by anchoring Cys-341 to the plasma membrane. Agonist stimulation promotes depalmitoylation and further allows Ser-345 and Ser-346 phosphorylation.
Phosphorylated by PKA and BARK upon agonist stimulation, which mediates homologous desensitization of the receptor. PKA-mediated phosphorylation seems to facilitate phosphorylation by BARK. Phosphorylated upon DNA damage, probably by ATM or ATR.
Phosphorylation of Tyr-141 is induced by insulin and leads to supersensitization of the receptor.
Polyubiquitinated. Agonist-induced ubiquitination leads to sort internalized receptors to the lysosomes for degradation. Deubiquitination by USP20 and USP33, leads to ADRB2 recycling and resensitization after prolonged agonist stimulation. USP20 and USP33 are constitutively associated and are dissociated immediately after agonist stimulation. Ubiquitination by the VHL-E3 ligase complex is oxygen-dependent.

Hydroxylation by EGLN3 occurs only under normoxia and increases the interaction with VHL and the subsequent ubiquitination and degradation of ADRB2.

Similarity:
Belongs to the G-protein coupled receptor 1 family. Adrenergic receptor subfamily. ADRB2 sub-subfamily.

Database links:

Entrez Gene: 154 Human

Entrez Gene: 11555 Mouse

Entrez Gene: 24176 Rat

Omim: 109690 Human

SwissProt: P07550 Human

SwissProt: P18762 Mouse

SwissProt: P10608 Rat

Unigene: 2551 Human

Unigene: 5598 Mouse

Unigene: 10206 Rat

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