SunLong Biotech Co.,LTD
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Rabbit Anti-CHRNA7 antibody

SL1049R

Product Name	CHRNA7
Chinese Name	烟碱型乙酰胆碱受体 α7 抗体
Alias	CHRFAM7A; ACHA7_HUMAN; cholinergic receptor, nicotinic, alpha 7; Neuronal acetylcholine receptor subunit alpha-7; ACHR ALPHA 7; AChR alpha 7 Receptor; Acra7; ALPHA-7NACHR; ALPHA7; ALPHA7 NICOTINIC ACETYLCHOLINE RECEPTOR; Alpha7 nicr; BTX; CHRNA7; CHRNA7-2; NACHR alpha7; NACHRA7; NARAD; Alpha 7 neuronal nicotinic acetylcholine receptor FAM7A hybrid; CHRNA7 (cholinergic receptor nicotinic alpha 7 exons 5 10) and FAM7A (family with sequence similarity 7A exons A E) fusion; CHRNA7; CHRNA7 DR1; CHRNA7 FAM7A fusion; CHRNA7 FAM7A fusion protein; D 10; D10; MGC120482; MGC120483. nicotinic α7; nicotinicα7; nicotinic α 7; nicotinic α-7; nicotinic-α7.
Research Area	Cell biology Neurobiology Signal transduction Apoptosis Channel protein The cell membrane 受体
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Human, Mouse, Rat, (predicted: Chicken,)
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	55kDa
Cellular localization	The cell membrane
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human CHRNA7: 441-502/502 <Cytoplasmic>
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

The Nicotinic Acetylcholine Receptors are members of a superfamily of ligand gated ion channels that mediate fast signal transmission at synapses. These receptors are thought to be hetero pentamers composed of homologous subunits. The proposed structure for each subunit is a conserved N terminal extracellular domain followed by three conserved transmembrane domains, a variable cytoplasmic loop, a fourth conserved transmembrane domain, and a short C terminal extracellular region. The Nicotinic Acetylcholine Receptor alpha 7 forms a homo oligomeric channel, displays marked permeability to calcium ions and is a major component of brain nicotinic receptors that are blocked by, and highly sensitive to, alpha bungarotoxin. Once this receptor binds acetylcholine, it undergoes an extensive change in conformation that affects all subunits and leads to opening of an ion conducting channel across the plasma membrane.

Function:
After binding acetylcholine, the AChR responds by an extensive change in conformation that affects all subunits and leads to opening of an ion-conducting channel across the plasma membrane. The channel is blocked by alpha-bungarotoxin.

Product Detail

Subunit:
Homopentamer. Interacts with RIC3; which is required for proper folding and assembly.

Subcellular Location:
Cell junction, synapse, postsynaptic cell membrane; Multi-pass membrane protein. Cell membrane; Multi-pass membrane protein.

Similarity:
Belongs to the ligand-gated ion channel (TC 1.A.9) family. Acetylcholine receptor (TC 1.A.9.1) subfamily. Alpha-7/CHRNA7 sub-subfamily.

SWISS:
P36544

Gene ID:
1139

Database links:

Entrez Gene: 1139 Human

Entrez Gene: 374001 Chicken

Entrez Gene: 282178 Cow

Entrez Gene: 11441 Mouse

Entrez Gene: 25302 Rat

Omim: 118511 Human

SwissProt: P22770 Chicken

SwissProt: P54131 Cow

SwissProt: P36544 Human

SwissProt: Q8IUZ4 Human

SwissProt: P49582 Mouse

SwissProt: Q05941 Rat

Unigene: 88 Cow

Unigene: 511772 Human

Unigene: 113464 Mouse

Unigene: 9698 Rat

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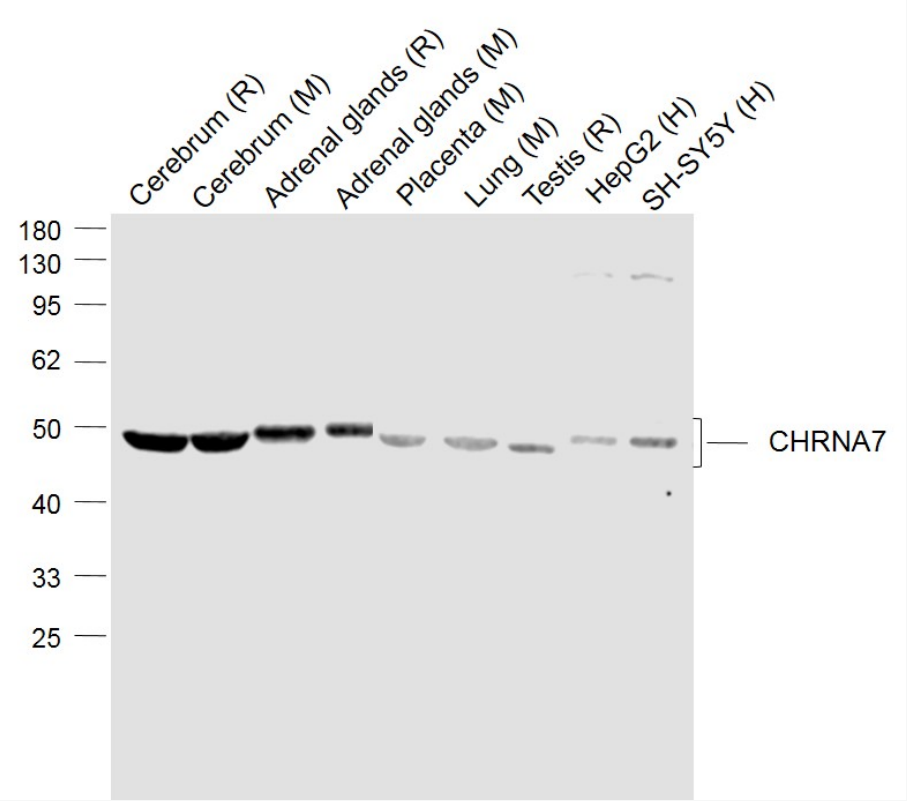
Product Picture



Sample:

Lane 1: Cerebrum (Rat) Lysate at 40 ug

Lane 2: Cerebrum (Mouse) Lysate at 40 ug

Lane 3: Adrenal glands (Rat) Lysate at 40 ug

Lane 4: Adrenal glands (Mouse) Lysate at 40 ug

Lane 5: Placenta (Mouse) Lysate at 40 ug

Lane 6: Lung (Mouse) Lysate at 40 ug

Lane 7: Testis (Rat) Lysate at 40 ug

Lane 8: HepG2 (Human) Cell Lysate at 30 ug

Lane 9: SH-SY5Y (Human) Cell Lysate at 30 ug

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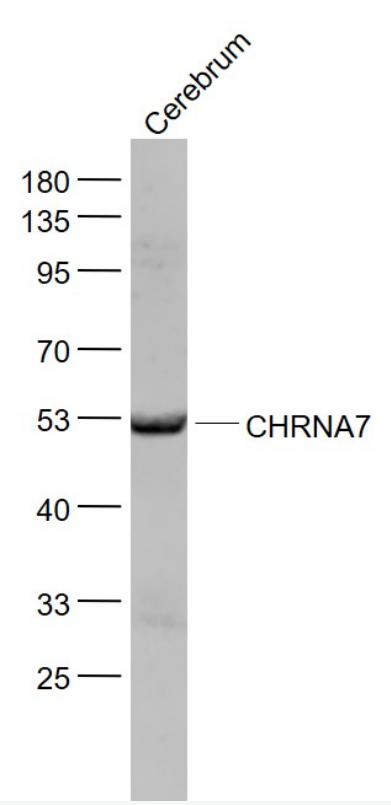
Primary: Anti-CHRNA7 (SL1049R) at 1/1000 dilution

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

Predicted band size: 56’50 kD

Observed band size: 48 kD



Sample:

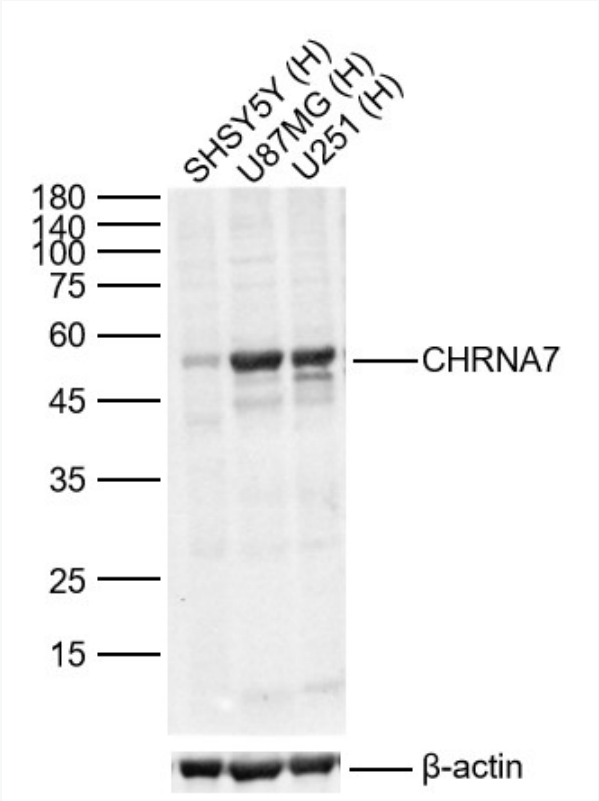
Cerebrum (Mouse) Lysate at 40 ug

Primary: Anti- CHRNA7 (SL1049R) at 1/500 dilution

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

Predicted band size: 55 kD

Observed band size: 53 kD



Sample:

Lane 1: Human SH-SY5Y cell Lysates

Lane 2: Human U-87 MG cell Lysates

Lane 3: Human U251 cell Lysates

Primary: Anti-CHRNA7 (SL1049R) at 1/1000 dilution

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

Predicted band size: 55kDa

Observed band size: 55kDa

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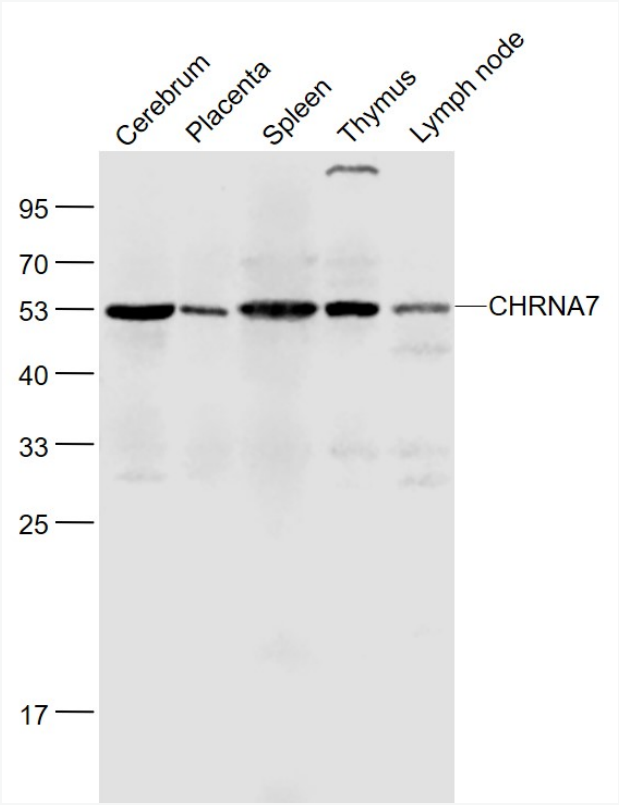


Sample:

Cerebrum (Mouse) Lysate at 40 ug

Placenta (Mouse) Lysate at 40 ug

Spleen (Mouse) Lysate at 40 ug

Thymus (Mouse) Lysate at 40 ug

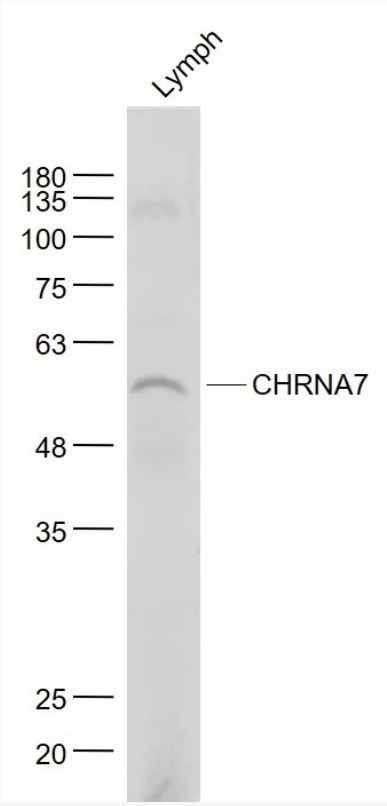
Lymph node (Mouse) Lysate at 40 ug

Primary: Anti- CHRNA7 (SL1049R) at 1/500 dilution

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

Predicted band size: 55 kD

Observed band size: 53 kD



Sample:

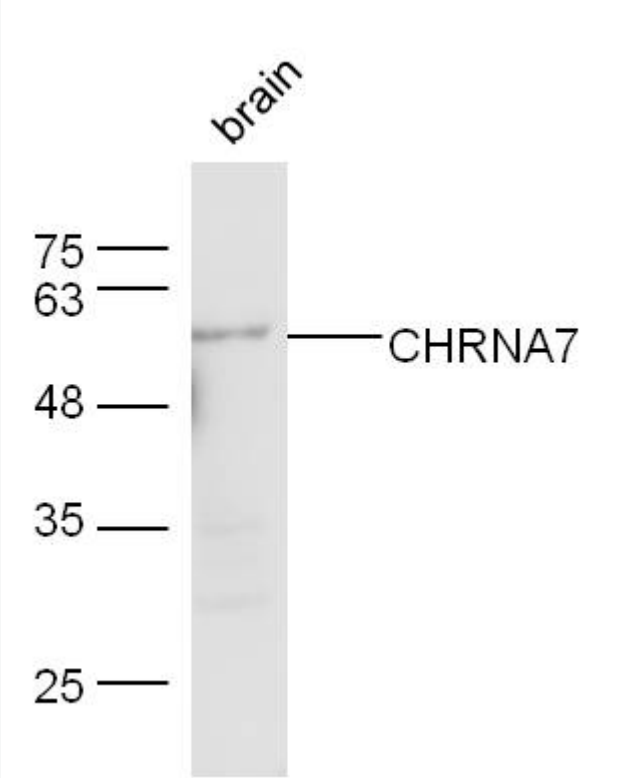
Lymph (Mouse) Lysate at 40 ug

Primary: Anti- CHRNA7 (SL1049R) at 1/1000 dilution

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

Predicted band size: 55 kD

Observed band size: 55 kD



Sample: Brain(Mouse) lysate at 30ug;

Primary: Anti- CHRNA7 (SL1049R) at 1:300 dilution ;

Secondary: HRP conjugated Goat-Anti-rabbit IgG(SL0295G-HRP) at 1: 5000 dilution;

Predicted band size: 55 kD

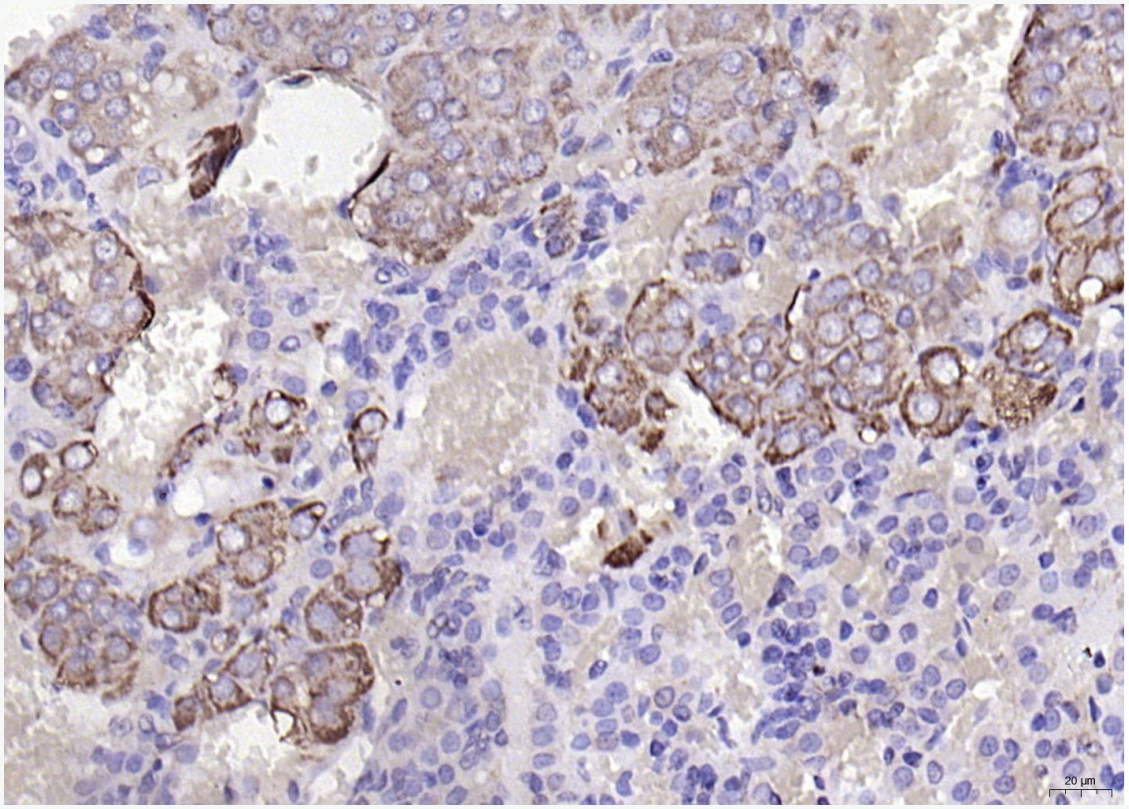
Observed band size: 55kD

Tissue/cell: mouse brain 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

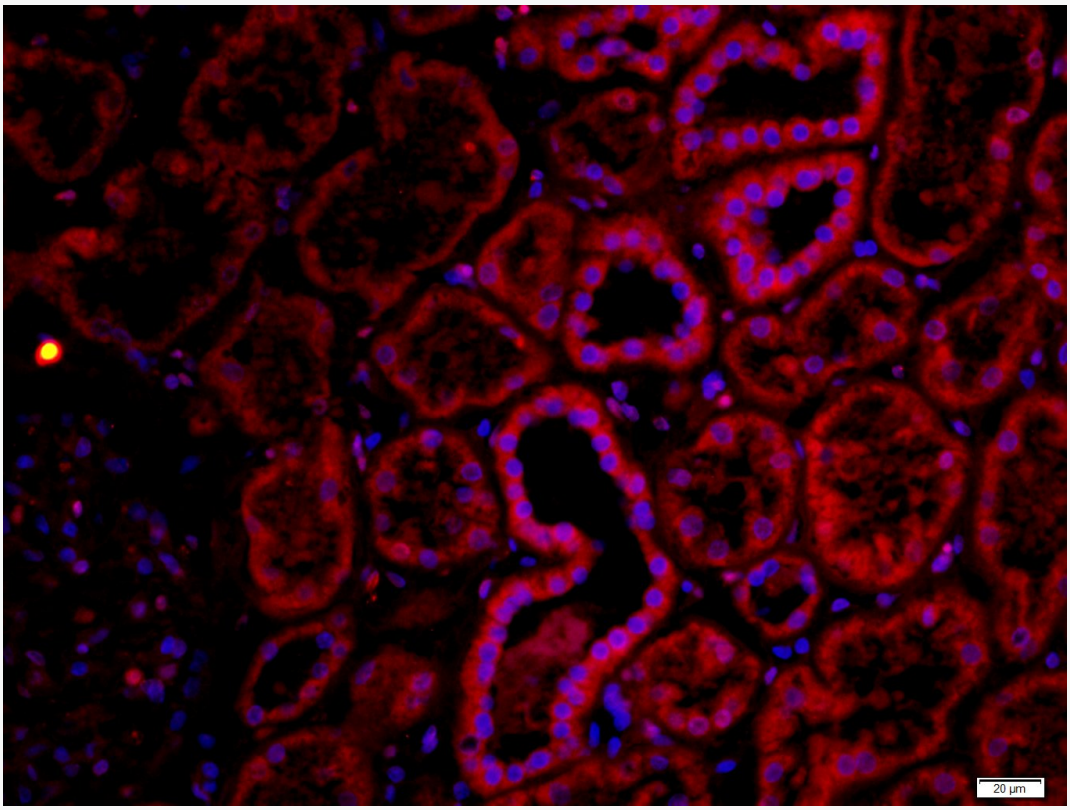
goat serum,C-0005) at 37℃ for 20 min;

Incubation: Anti-CHRNA7 Polyclonal Antibody, Unconjugated(SL1049R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Paraformaldehyde-fixed, paraffin embedded (rat adrenal gland); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (CHRNA7) Polyclonal Antibody, Unconjugated (SL1049R) at 1:200 overnight at 4°C, followed by operating according to SP

Kit(Rabbit) (sp-0023) instructionsand DAB staining.



Tissue/cell: human kidney tissue;4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;

Incubation: Anti-CHRNA7 Polyclonal Antibody, Unconjugated(SL1049R) 1:200, overnight at 4°C; The secondary antibody was Goat Anti-Rabbit IgG, Cy3 conjugated(SL0295G-Cy3)used at 1:200 dilution for 40 minutes at 37°C.

DAPI(5ug/ml,blue,C-0033) was used to stain the cell nuclei