bs-1049R **[Primary Antibody]**

CHRNA7 Rabbit pAb

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DATASHEET

Host: Rabbit **Isotype:** IgG

Clonality: Polyclonal

GeneID: 1139 **SWISS:** P36544

Target: CHRNA7

Immunogen: KLH conjugated synthetic peptide derived from human CHRNA7: 441-502/502. < Cytoplasmic >

Purification: affinity purified by Protein A

Concentration: 1mg/ml

Storage: 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
Shipped at 4°C. Store at -20°C for one year. Avoid repeated freeze/thaw cycles.

Background: 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.

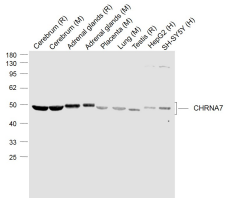
Applications: **WB** (1:500-2000)
IHC-P (1:100-500)
IHC-F (1:100-500)
IF (1:100-500)

Reactivity: Human, Mouse, Rat (predicted: Chicken)

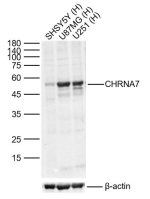
Predicted MW.: 55 kDa

Subcellular Location: Cell membrane

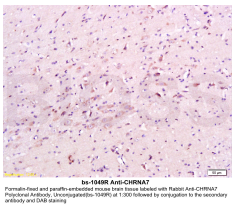
VALIDATION IMAGES



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 Primary: Anti-CHRNA7 (bs-1049R) 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

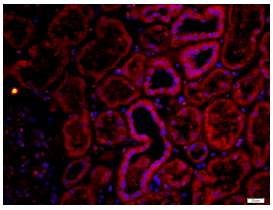


Sample: Lane 1: Human SH-SY5Y cell Lysates Lane 2: Human U-87 MG cell Lysates Lane 3: Human U251 cell Lysates Primary: Anti-CHRNA7 (bs-1049R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 55kDa Observed band size: 55kDa



Tissue/cell: mouse brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, 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°C for 20 min; Incubation: Anti-CHRNA7 Polyclonal Antibody, Unconjugated(bs-1049R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

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



Tissue/cell: human kidney tissue;4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min; Incubation: Anti-CHRNA7 Polyclonal Antibody, Unconjugated(bs-1049R) 1:200, overnight at 4°C; The secondary antibody was Goat Anti-Rabbit IgG, Cy3 conjugated(bs-0295G-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

SELECTED CITATIONS

- **[IF=15.84]** Han Yang. et al. A Novel Targeted and High‐Efficiency Nanosystem for Combinational Therapy for Alzheimer's Disease. Adv Sci. 2020 Oct;7(19):1902906 ELISA,FCM ;Mouse. 33042734
- **[IF=7.3]** Suleyma Oliveira Costa. et al. Maternal consumption of a high-fat diet modulates the inflammatory response in their offspring, mediated by the M1 muscarinic receptor. FRONT IMMUNOL. 2023; 14: 1273556 WB ;Mouse. 38193079
- **[IF=5.441]** H.E. Burzynski. et al. Pyridostigmine bromide elicits progressive and chronic impairments in the cholinergic anti-inflammatory pathway in the prefrontal cortex and hippocampus of male rats. NEUROBIOL STRESS. 2022 May;18:100446 WB ;Rat. 35573808
- **[IF=5.2]** Jie Zhao. et al. Sinomenine modulates the metabolic reprogramming induced by sepsis via CHRNA7. LIFE SCI. 2025 Jan;361:123332 WB ;Mouse. 39722318
- **[IF=5.2]** Claudia Guerriero. et al. Effects of Selective α7 Nicotinic Acetylcholine Receptor Stimulation in Oligodendrocytes: Putative Implication in Neuroinflammation. CELLS-BASEL. 2025 Jan;14(13):948 WB ;Mouse. 40643469

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