SunLong Biotech Co.,LTD
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Rabbit Anti-GNB1 antibody

SL0348R

Product Name	GNB1
Chinese Name	G 蛋白/鸟苷酸 Binding protein 抗体
Alias	G protein beta subunit GI/GS/GT; guanine nucleotide binding protein (G protein), beta polypeptide 1; guanine nucleotide-binding protein G; GBB1_HUMAN.
Research Area	Cell biology immunology Neurobiology
Immunogen Species	Rabbit
Clonality	Polyclonal
React Species	Mouse, Rat, (predicted: Human, Chicken, Dog, Pig, Cow, Horse,)
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	37kDa
Cellular localization	cytoplasmic The cell membrane
Form	Liquid
Concentration	1mg/ml
immunogen	KLH conjugated synthetic peptide derived from human G protein beta subunit GI: 101-200/341
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

Product Detail

G protein beta subunit GI/GS/GT (guanine nucleotide-binding protein G). WD40 domain, found in a number of eukaryotic proteins that cover a wide variety of functions including adaptor/regulatory modules in signal transduction, pre-mRNA processing and cytoskeleton assembly; typically contains a GH dipeptide 11-24 residues from its N-terminus and the WD dipeptide at its C-terminus and is 40 residues long, hence the name WD40; between GH and WD lies a conserved core; serves as a stable propeller-like platform to which proteins can bind either stably or reversibly; forms a propeller-like structure with several blades where each blade is composed of a four-stranded anti-parallel b-sheet; instances with few detectable copies are hypothesized to form larger structures by dimerization; each WD40 sequence repeat forms the first three strands of one blade and the last strand in the next blade; the last C-terminal WD40 repeat completes the blade structure of the first WD40 repeat to create the closed ring propeller-structure; residues on the top and bottom surface of the propeller are proposed to coordinate interactions with other proteins and/or small ligands; 7 copies of the repeat are present in this alignment.

Function:
Guanine nucleotide-binding proteins (G proteins) are involved as a modulator or transducer in various transmembrane signaling systems. The beta and gamma chains are required for the GTPase activity, for replacement of GDP by GTP, and for G protein-effector interaction.

Subunit:
G proteins are composed of 3 units, alpha, beta and gamma. Interacts with ARHGEF18 and RASD2. The heterodimer formed by GNB1 and GNG2 interacts with PTH1R (via C-terminus).

Post-translational modifications:
Phosphorylation at His-266 by NDKB contributes to G protein activation by increasing the high energetic phosphate transfer onto GDP.

Similarity:
Belongs to the WD repeat G protein beta family.
Contains 7 WD repeats.

SWISS:
P62879

Gene ID:
2782

Database links:

Entrez Gene: 2782 Human

Entrez Gene: 14688 Mouse

Entrez Gene: 24400 Rat

Omim: 139380 Human

SwissProt: P62873 Human

SwissProt: P62874 Mouse

SwissProt: P54311 Rat

Unigene: 430425 Human

Unigene: 2344 Mouse

Unigene: 126047 Rat

G 蛋白又称：鸟苷酸 Binding protein，存在于全身各个组织和细胞中，G 蛋白在信息传递中起到很重要的作用,参与细胞内外信息的相互传导。
激素受体与腺苷酸环化酶是 The cell membrane 上两类分开的蛋白质。激素受体结合的部分在 The cell membrane 的外表面，而腺苷环化酶在膜的胞浆面，在两者之间存在一种起耦联作用的调节蛋白——鸟苷酸 Binding protein（guanine nucleotide-binding regulatory protein）细胞受到各种刺激信息，包括化学性的激素和神经递质及非化学性的声音、图像等。刺激信息通过 G 蛋白的激活作用，在胞浆中生成数目众多的第二信使分子，产生十万级放大效应，引起细胞兴奋，让后促动器官完成各自功能。
1977 年，美国科学家阿尔弗雷德-戈德曼-吉尔曼(Alfred Goodman Gilman)发现了 G 蛋白及其在细胞兴奋传导方面的重要作用。1994 年，吉尔曼因“G 蛋白”方面的研究成果而荣获诺贝尔生理及医学奖。

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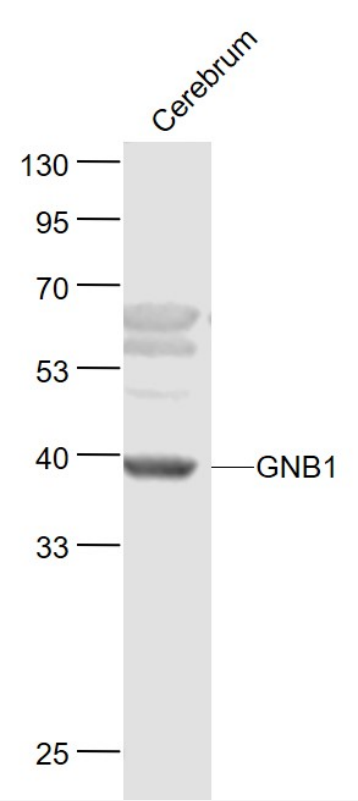
Product Picture



Sample:

Cerebrum (Mouse) Lysate at 40 ug

Primary: Anti-GNB1 (SL0348R) at 1/1000 dilution

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

Predicted band size: 37 kD

Observed band size: 37 kD

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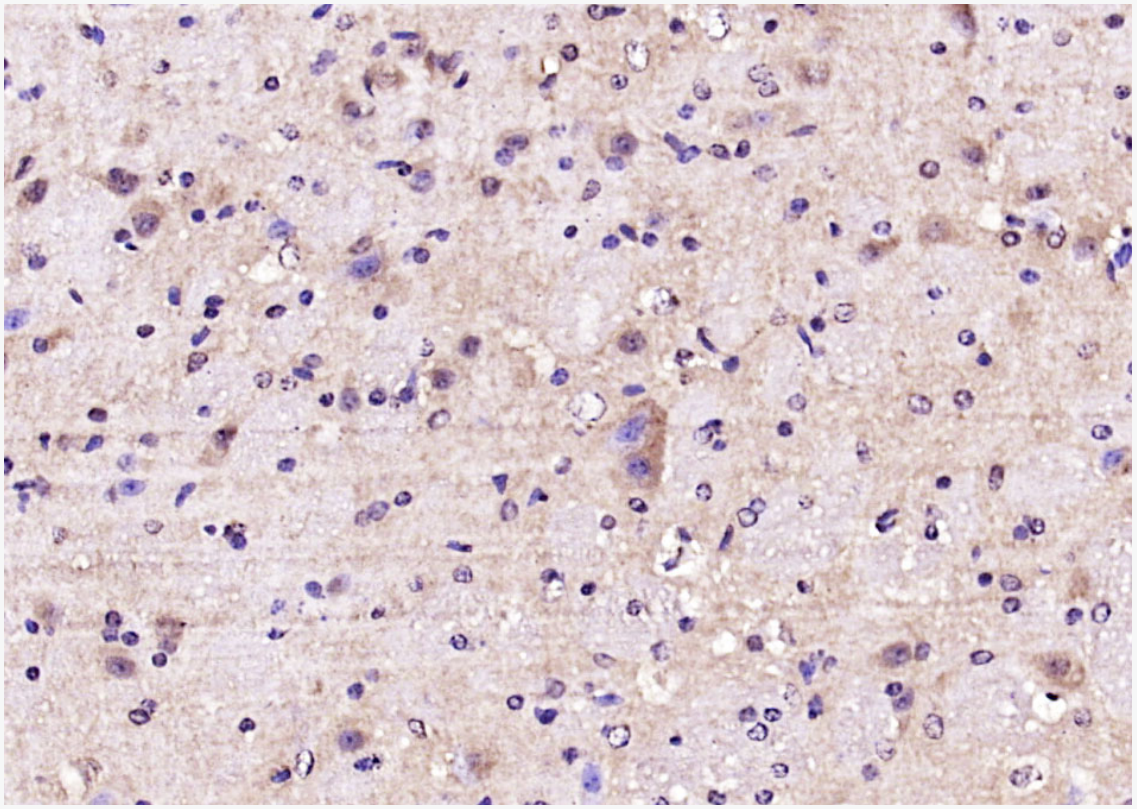

Paraformaldehyde-fixed, paraffin embedded (mouse brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (GNB1) Polyclonal Antibody, Unconjugated (SL0348R) at 1:200 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructionsand DAB staining.

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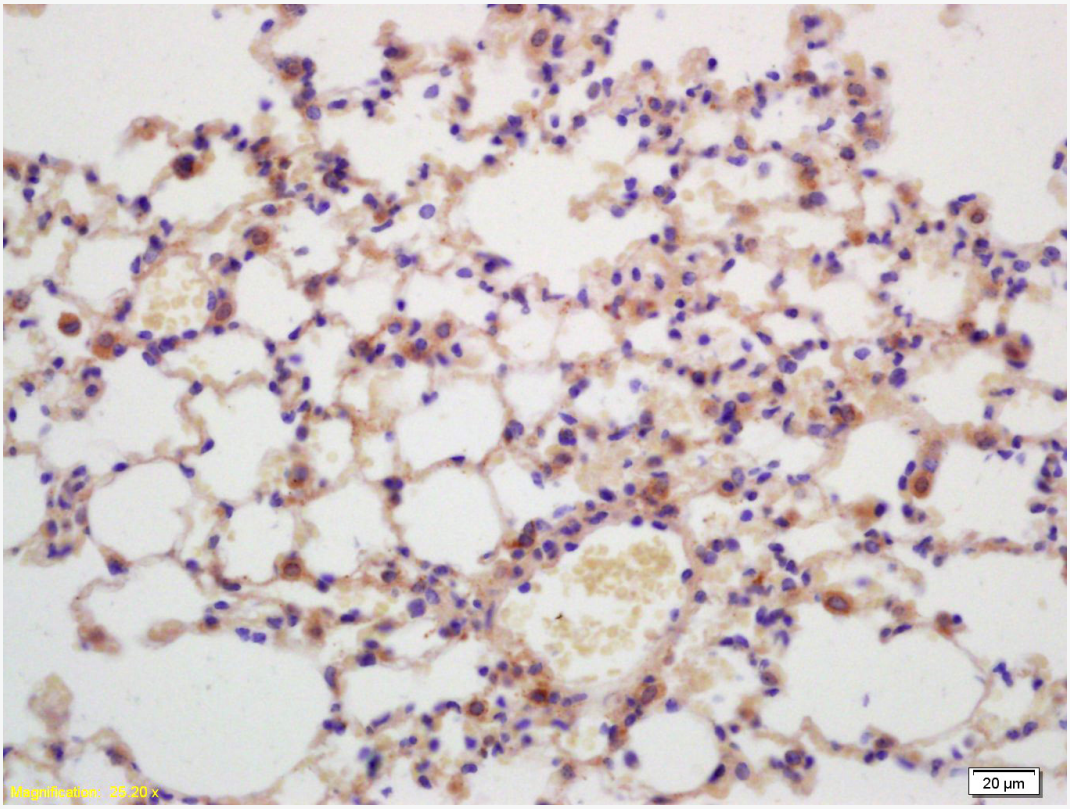

Tissue/cell: mouse lung tissue; 4% Paraformaldehyde-fixed and paraffin-embedded; Antigen retrieval: citrate buffer (1M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37℃ for 20 min;

Incubation: Anti-G protein beta subunit GI Polyclonal Antibody, Unconjugated(SL0348R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining

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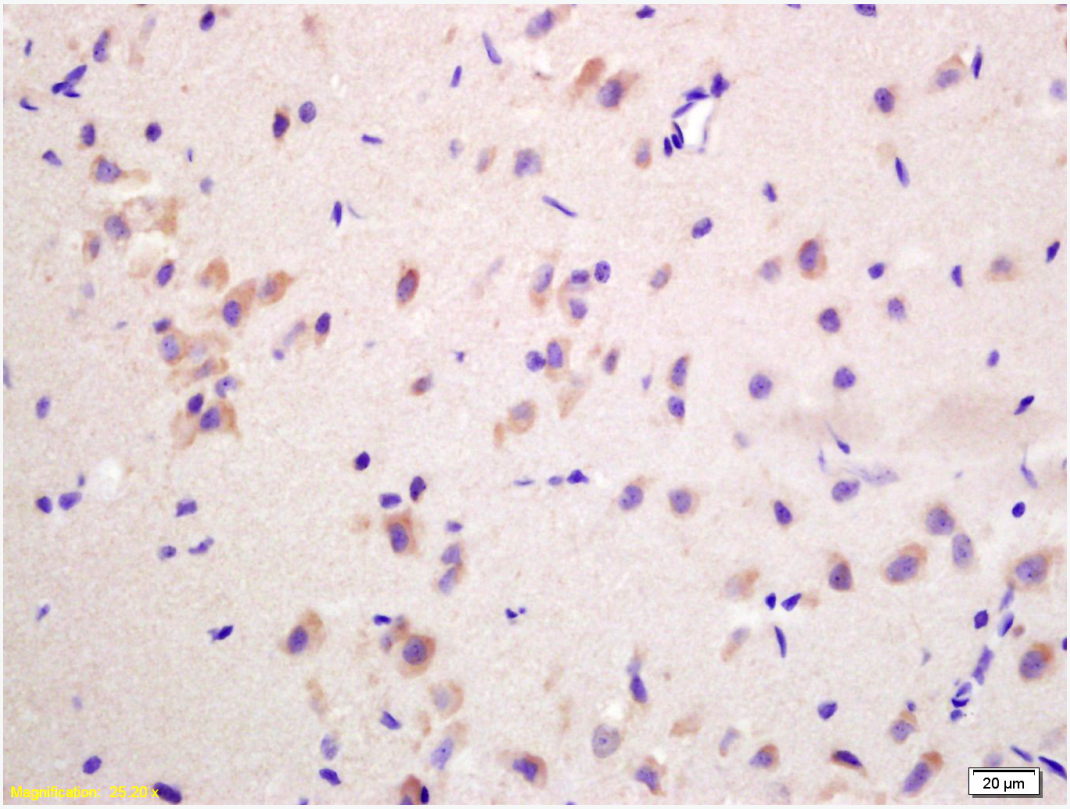

Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;

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-G protein beta subunit GI Polyclonal Antibody, Unconjugated(SL0348R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining