

## Rabbit SIGMAR1 Polyclonal Antibody | anti-SIGMAR1 antibody

SIGMAR1 Antibody

| CATALOG # | HOST   | REACTIVITY        | APPLICATIONS                              |
|-----------|--------|-------------------|-------------------------------------------|
| AAA327064 | Rabbit | Human, Mouse, Rat | ELISA, Immunohistochemistry, Western Blot |

### PRODUCT SYNONYMS

SIGMAR1; Polyclonal Antibody; SIGMAR1 Antibody; Aging associated gene 8 protein; Aging-associated gene 8 protein; AL024364; hSigmaR1; mSigmaR1; opioid receptor; sigma 1; sigma 1 isoform 1; RP23 167112.6; SGMR1\_HUMAN; SIG 1R; SIG-1R; Sigma 1-type opioid receptor; Sigma non-opioid intracellular receptor 1; sigma1 receptor; Sigma1-receptor; Sigma1R; Sigmar1; SR BP; SR-BP; SR31747 binding protein; SR31747-binding protein; SRBP; anti-SIGMAR1 antibody

### PRODUCT SPECIFICATIONS

|                                                   |                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Host                                              | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                       |
| Reactivity                                        | Human, Mouse, Rat                                                                                                                                                                                                                                                                                                                                                                                            |
| Clonality                                         | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                   |
| Isotype                                           | IgG                                                                                                                                                                                                                                                                                                                                                                                                          |
| Specificity                                       | SIGMAR1 antibody detects endogenous levels of total SIGMAR1                                                                                                                                                                                                                                                                                                                                                  |
| Purity/Purification                               | The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.                                                                                                                                                                                                                                                                                                                |
| Form/Format                                       | Liquid<br>Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.                                                                                                                                                                                                                                                                                                                |
| Concentration                                     | 1mg/ml (varies by lot)                                                                                                                                                                                                                                                                                                                                                                                       |
| Sequence Length                                   | 155                                                                                                                                                                                                                                                                                                                                                                                                          |
| Applicable Applications for anti-SIGMAR1 antibody | ELISA, IHC (Immunohistochemistry), WB (Western Blot)                                                                                                                                                                                                                                                                                                                                                         |
| Immunogen                                         | A synthesized peptide derived from human SIGMAR1                                                                                                                                                                                                                                                                                                                                                             |
| Subcellular Location                              | Nucleus Inner Membrane. Nucleus Outer Membrane. Endoplasmic Reticulum Membrane. Lipid Droplet. Cell Junction. Cell Membrane. Cell Projection > Growth Cone. Targeted to lipid droplets, cholesterol and galactosylceramide-enriched domains of the endoplasmic reticulum. Enriched at cell-cell communication regions, growth cone and postsynaptic structures. Localization is modulated by ligand-binding. |
| Tissue Specificity                                | Widely expressed with higher expression in liver, colon, prostate, placenta, small intestine, heart and pancreas. Expressed in the retina by retinal pigment epithelial cells. Expressed in alpha-motor neurons (PubMed:23314020).                                                                                                                                                                           |
| Predicted Cross Reactivity                        | <b>Pig, Bovine, Horse, Sheep, Rabbit, Dog</b>                                                                                                                                                                                                                                                                                                                                                                |
| Similarity                                        | Pig (100%), Bovine (100%), Horse (100%), Sheep (100%), Rabbit (100%), Dog (100%)                                                                                                                                                                                                                                                                                                                             |
| Conjugation                                       | Unconjugated                                                                                                                                                                                                                                                                                                                                                                                                 |
| Preparation and Storage                           | Store at -20 degree C. Stable for 12 months from date of receipt.                                                                                                                                                                                                                                                                                                                                            |

IMAGES



**WB (Western Blot)**  
Western blot analysis of extracts from mouse muscle, using SIGMAR1 Antibody.



**WB (Western Blot)**  
Western blot analysis of extracts from mouse liver, mouse muscle, rat brain, using SIGMAR1 Antibody.



**IHC (Immunohistochemistry)**  
AAA327064 at 1/100 staining Mouse liver tissue by IHC-P. The sample was formaldehyde fixed and a heat mediated antigen retrieval step in citrate buffer was performed. The sample was then blocked and incubated with the antibody for 1.5 hours at 22 degree C. An HRP conjugated goat anti-rabbit antibody was used as the secondary.



**WB (Western Blot)**  
Western blot analysis of 293T whole cell lysates, using SIGMAR1 Antibody. The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-SIGMAR1 antibody

Description: This gene encodes a receptor protein that interacts with a variety of psychotomimetic drugs, including cocaine and amphetamines. The receptor is believed to play an important role in the cellular functions of various tissues associated with the endocrine, immune, and nervous systems. As indicated by its previous name, opioid receptor sigma 1 (OPRS1), the product of this gene was erroneously thought to function as an opioid receptor; it is now thought to be a non-opioid receptor. Mutations in this gene has been associated with juvenile amyotrophic lateral sclerosis 16. Alternative splicing of this gene results in transcript variants encoding distinct isoforms.

Function: Functions in lipid transport from the endoplasmic reticulum and is involved in a wide array of cellular functions probably through regulation of the biogenesis of lipid microdomains at the plasma membrane. Involved in the regulation of different receptors it plays a role in BDNF signaling and EGF signaling. Also regulates ion channels like the potassium channel and could modulate neurotransmitter release. Plays a role in calcium signaling through modulation together with ANK2 of the ITP3R-dependent calcium efflux at the endoplasmic reticulum. Plays a role in several other cell functions including proliferation, survival and death. Originally identified for its ability to bind various psychoactive drugs it is involved in learning processes, memory and mood alteration (PubMed:16472803, PubMed:9341151). Necessary for proper mitochondrial axonal transport in motor neurons, in particular the retrograde movement of mitochondria. Plays a role in protecting cells against oxidative stress-induced cell death via its interaction with RNF112 (By similarity).

Subunit Structure: Homotrimer (PubMed:27042935). Forms a ternary complex with ANK2 and ITPR3. The complex is disrupted by agonists. Interacts with KCNA4. Interacts with KCNA2; cocaine consumption leads to increased interaction. Interacts with RNF112 in an oxidative stress-regulated manner (By similarity).

Similarity: The C-terminal helices form a flat, hydrophobic surface that is probably tightly associated with the cytosolic surface of the endoplasmic reticulum membrane. Belongs to the ERG2 family.

NCBI AND UNIPROT INFORMATION

|                                  |                                                                                        |
|----------------------------------|----------------------------------------------------------------------------------------|
| NCBI GI #                        | 532524982                                                                              |
| NCBI GeneID                      | 10280                                                                                  |
| NCBI Accession #                 | NP_001269134.1                                                                         |
| NCBI GenBank Nucleotide #        | NM_001282205.1                                                                         |
| UniProt Accession #              | Q99720; O00673; O00725; Q0Z9W6; Q153Z1; Q2TSD1; Q53GN2; Q7Z653; Q8N7H3; Q9NYX0; D3DRM7 |
| Molecular Weight                 | Observed: 25 kDa<br>Predicted: 26 kDa                                                  |
| NCBI Official Full Name          | sigma non-opioid intracellular receptor 1 isoform 6                                    |
| NCBI Official Synonym Full Names | sigma non-opioid intracellular receptor 1                                              |
| NCBI Official Symbol             | SIGMAR1                                                                                |

|                               |                                                                     |
|-------------------------------|---------------------------------------------------------------------|
| NCBI Official Synonym Symbols | SRBP; ALS16; DSMA2; OPRS1; SR-BP; SIG-1R; SR-BP1; sigma1R; hSigmaR1 |
| NCBI Protein Information      | sigma non-opioid intracellular receptor 1                           |
| UniProt Protein Name          | Sigma non-opioid intracellular receptor 1                           |
| UniProt Gene Name             | <b>SIGMAR1</b>                                                      |
| UniProt Synonym Gene Names    | OPRS1; SRBP; SR-BP; SIG-1R; Sigma1-receptor; Sigma1R; hSigmaR1      |

**For Research Use Only.** Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

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