

LRRC8A Antibody(C-term) Blocking peptide
Synthetic peptide
Catalog # BP19519b**Specification**

LRRC8A Antibody(C-term) Blocking peptide - Product InformationPrimary Accession [Q8IWT6](#)**LRRC8A Antibody(C-term) Blocking peptide - Additional Information**

Gene ID 56262

Other Names

Volume-regulated anion channel subunit LRRC8A, Leucine-rich repeat-containing protein 8A, Swelling protein 1, LRRC8A, KIAA1437, LRRC8, SWELL1

Format

Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions

This product is for research use only. Not for use in diagnostic or therapeutic procedures.

LRRC8A Antibody(C-term) Blocking peptide - Protein Information**Name** LRRC8A {ECO:0000303|PubMed:22532330, ECO:0000312|HGNC:HGNC:19027}**Function**

Essential component of the volume-regulated anion channel (VRAC, also named VSOAC channel), an anion channel required to maintain a constant cell volume in response to extracellular or intracellular osmotic changes (PubMed:24725410, PubMed:29769723, PubMed:24790029, PubMed:26530471, PubMed:26824658, PubMed:28193731). The VRAC channel conducts iodide better than chloride and can also conduct organic osmolytes like taurine (PubMed:24725410, PubMed:30095067, PubMed:24790029, PubMed:26530471, PubMed:26824658, PubMed:28193731). Mediates efflux of amino acids, such as aspartate and glutamate, in response to osmotic stress (PubMed:24725410, PubMed:30095067, PubMed:24790029, PubMed:26530471, PubMed:26824658, PubMed:28193731).

[28193731](http://www.uniprot.org/citations/28193731)). LRRC8A and LRRC8D are required for the uptake of the drug cisplatin (PubMed: [26530471](http://www.uniprot.org/citations/26530471)). In complex with LRRC8C or LRRC8E, acts as a transporter of immunoreactive cyclic dinucleotide GMP-AMP (2'-3'-cGAMP), an immune messenger produced in response to DNA virus in the cytosol: mediates both import and export of 2'-3'-cGAMP, thereby promoting transfer of 2'-3'-cGAMP to bystander cells (PubMed: [33171122](http://www.uniprot.org/citations/33171122)). In contrast, complexes containing LRRC8D inhibit transport of 2'-3'-cGAMP (PubMed: [33171122](http://www.uniprot.org/citations/33171122)). Required for in vivo channel activity, together with at least one other family member (LRRC8B, LRRC8C, LRRC8D or LRRC8E); channel characteristics depend on the precise subunit composition (PubMed: [24790029](http://www.uniprot.org/citations/24790029), PubMed: [26824658](http://www.uniprot.org/citations/26824658), PubMed: [28193731](http://www.uniprot.org/citations/28193731)). Can form functional channels by itself (in vitro) (PubMed: [26824658](http://www.uniprot.org/citations/26824658)). Involved in B-cell development: required for the pro-B cell to pre-B cell transition (PubMed: [14660746](http://www.uniprot.org/citations/14660746)). Also required for T-cell development (By similarity). Required for myoblast differentiation: VRAC activity promotes membrane hyperpolarization and regulates insulin-stimulated glucose metabolism and oxygen consumption (By similarity). Also acts as a regulator of glucose-sensing in pancreatic beta cells: VRAC currents, generated in response to hypotonicity- or glucose-induced beta cell swelling, depolarize cells, thereby causing electrical excitation, leading to increase glucose sensitivity and insulin secretion (PubMed: [29371604](http://www.uniprot.org/citations/29371604)). Also plays a role in lysosome homeostasis by forming functional lysosomal VRAC channels in response to low cytoplasmic ionic strength condition: lysosomal VRAC channels are necessary for the formation of large lysosome-derived vacuoles, which store and then expel excess water to maintain cytosolic water homeostasis (PubMed: [31270356](http://www.uniprot.org/citations/31270356), PubMed: [33139539](http://www.uniprot.org/citations/33139539)).

Cellular Location

Cell membrane; Multi-pass membrane protein. Lysosome membrane; Multi-pass membrane protein. Note=Mainly localizes to the cell membrane, with some intracellular localization to lysosomes

Tissue Location

Expressed in brain, kidney, ovary, lung, liver, heart, and fetal brain and liver. Found at high levels in bone marrow; lower levels are detected in peripheral blood cells. Expressed on T- cells as well as on B-lineage cells.

LRRC8A Antibody(C-term) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Blocking Peptides](#)

LRRC8A Antibody(C-term) Blocking peptide - Images

LRRC8A Antibody(C-term) Blocking peptide - Background

This gene encodes a protein belonging to the leucine-rich repeat family of proteins, which are involved in diverse biological processes, including cell adhesion, cellular trafficking, and hormone-receptor interactions. This family member is a putative four-pass transmembrane protein that plays a role in B cell development. Defects in this gene cause autosomal dominant non-Bruton type agammaglobulinemia, an immunodeficiency disease resulting from defects in B cell maturation. Multiple alternatively spliced transcript variants, which encode the

same protein, have been identified for this gene.

LRRC8A Antibody(C-term) Blocking peptide - References

Olsen, J.V., et al. Cell 127(3):635-648(2006) Smits, G., et al. Mol. Immunol. 41(5):561-562(2004) Kubota, K., et al. FEBS Lett. 564 (1-2), 147-152 (2004) :Sawada, A., et al. J. Clin. Invest. 112(11):1707-1713(2003) Conley, M.E. J. Clin. Invest. 112(11):1636-1638(2003)