

RRAGD Antibody (Center) Blocking Peptide
Synthetic peptide
Catalog # BP4959c**Specification**

RRAGD Antibody (Center) Blocking Peptide - Product InformationPrimary Accession [O9NQL2](#)**RRAGD Antibody (Center) Blocking Peptide - Additional Information****Gene ID** 58528**Other Names**

Ras-related GTP-binding protein D, Rag D, RagD, RRAGD (http://www.genenames.org/cgi-bin/gene_symbol_report?hgnc_id=19903)
target="_blank">HGNC:19903)

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.

RRAGD Antibody (Center) Blocking Peptide - Protein Information**Name** RRAGD ([HGNC:19903](#))**Function**

Guanine nucleotide-binding protein that plays a crucial role in the cellular response to amino acid availability through regulation of the mTORC1 signaling cascade (PubMed:[20381137](http://www.uniprot.org/citations/20381137), PubMed:[24095279](http://www.uniprot.org/citations/24095279), PubMed:[34607910](http://www.uniprot.org/citations/34607910)). Forms heterodimeric Rag complexes with RagA/RRAGA or RagB/RRAGB and cycles between an inactive GTP-bound and an active GDP-bound form: RagD/RRAGD is in its active form when GDP-bound RagD/RRAGD forms a complex with GTP-bound RagA/RRAGA (or RagB/RRAGB) and in an inactive form when GTP-bound RagD/RRAGD heterodimerizes with GDP-bound RagA/RRAGA (or RagB/RRAGB) (PubMed:[24095279](http://www.uniprot.org/citations/24095279)). In its active form, promotes the recruitment of mTORC1 to the lysosomes and its subsequent activation by the GTPase RHEB (PubMed:[20381137](http://www.uniprot.org/citations/20381137), PubMed:[24095279](http://www.uniprot.org/citations/24095279)). This is a crucial step in the activation of the MTOR signaling cascade by amino acids (PubMed:[20381137](http://www.uniprot.org/citations/20381137), PubMed:[20381137](http://www.uniprot.org/citations/20381137), PubMed:[20381137](http://www.uniprot.org/citations/20381137)).

href="http://www.uniprot.org/citations/24095279" target="_blank">24095279). Also plays a central role in the non-canonical mTORC1 complex, which acts independently of RHEB and specifically mediates phosphorylation of MiT/TFE factors TFEB and TFE3: GDP-bound RagD/RRAGD mediates recruitment of MiT/TFE factors TFEB and TFE3 (PubMed:32612235).

Cellular Location

Cytoplasm. Nucleus. Lysosome membrane. Note=Predominantly cytoplasmic (PubMed:11073942). Recruited to the lysosome surface by the Ragulator complex (PubMed:20381137). May shuttle between the cytoplasm and nucleus, depending on the bound nucleotide state of associated RRAGA (PubMed:11073942).

RRAGD Antibody (Center) Blocking Peptide - Protocols

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

- [Blocking Peptides](#)

RRAGD Antibody (Center) Blocking Peptide - Images

RRAGD Antibody (Center) Blocking Peptide - Background

RRAGD is a monomeric guanine nucleotide-binding protein, or G protein. By binding GTP or GDP, small G proteins act as molecular switches in numerous cell processes and signaling pathways.

RRAGD Antibody (Center) Blocking Peptide - References

Olsen, J.V., et al. Cell 127(3):635-648(2006)de Wit, N.J., et al. Br. J. Cancer 92(12):2249-2261(2005)Sekiguchi, T., et al. J. Biol. Chem. 279(9):8343-8350(2004)