

DEPD5 Antibody (C-term) Blocking peptide
Synthetic peptide
Catalog # BP12010b**Specification**

DEPD5 Antibody (C-term) Blocking peptide - Product InformationPrimary Accession [O75140](#)**DEPD5 Antibody (C-term) Blocking peptide - Additional Information**

Gene ID 9681

Other Names

DEP domain-containing protein 5, DEPDC5, KIAA0645

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.

DEPD5 Antibody (C-term) Blocking peptide - Protein Information**Name** DEPDC5 {ECO:0000303|PubMed:23542697, ECO:0000312|HGNC:HGNC:18423}**Function**

As a component of the GATOR1 complex functions as an inhibitor of the amino acid-sensing branch of the mTORC1 pathway (PubMed:23723238, PubMed:25457612, PubMed:29769719, PubMed:31548394, PubMed:29590090, PubMed:35338845). In response to amino acid depletion, the GATOR1 complex has GTPase activating protein (GAP) activity and strongly increases GTP hydrolysis by RagA/RRAGA (or RagB/RRAGB) within heterodimeric Rag complexes, thereby turning them into their inactive GDP-bound form, releasing mTORC1 from lysosomal surface and inhibiting mTORC1 signaling (PubMed:23723238, PubMed:25457612, PubMed:29769719, PubMed:29590090, PubMed:35338845). In the presence of abundant amino acids, the GATOR1 complex is negatively regulated by GATOR2, the other GATOR subcomplex, in this amino acid-sensing branch of the TORC1 pathway

(PubMed:23723238, PubMed:25457612, PubMed:29769719). Within the GATOR1 complex, DEPDC5 mediates direct interaction with the nucleotide- binding pocket of small GTPases Rag (RagA/RRAGA, RagB/RRAGB, RagC/RRAGC and/or RagD/RRAGD) and coordinates their nucleotide loading states by promoting RagA/RRAGA or RagB/RRAGB into their GDP-binding state and RagC/RRAGC or RagD/RRAGD into their GTP-binding state (PubMed:29590090, PubMed:35338845). However, it does not execute the GAP activity, which is mediated by NPRL2 (PubMed:29590090).

Cellular Location

Lysosome membrane. Cytoplasm, cytosol {ECO:0000250|UniProtKB:P61460}. Cytoplasm, perinuclear region {ECO:0000250|UniProtKB:P61460}. Note=Localization to lysosomes is mediated by the KICSTOR complex and is amino acid- independent.

Tissue Location

Expressed in developing and adult brain.

DEPD5 Antibody (C-term) Blocking peptide - Protocols

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

- [Blocking Peptides](#)

DEPD5 Antibody (C-term) Blocking peptide - Images