

KLHL25 Antibody

Purified Mouse Monoclonal Antibody Catalog # AO1418a

Specification

KLHL25 Antibody - Product Information

Application Primary Accession Reactivity Host Clonality Isotype Calculated MW **Description** WB, E <u>O9H0H3</u> Human Mouse Monoclonal IgG2b 65kDa KDa

KLHL25 (ectoderm-neural cortex protein 2, ENC2) is a cytoplasmic protein that contains six Kelch regions and a single BTB (POZ) domain. KLHL25 is highly homologus to another Kelch-like protein, ENC1, and it is believed to operate in a manner similar to other Kelch-domain containing proteins. Kelch-domain repeat containing proteins often act as modifiers of Actin fibers. Expressed early in embryogenesis, ENC1 helps to mediate neuronal process formation. It also appears to have a role in neural crest cell differentiation. KLHL25 likely functions as a substrate specific adapter for protein ubiquitinating complexes. KLHL25 is expressed in most tissues with highest expression in brain and liver.

Immunogen Purified recombinant fragment of human KLHL25 expressed in E. Coli.

Formulation Ascitic fluid containing 0.03% sodium azide.

KLHL25 Antibody - Additional Information

Gene ID 64410

Other Names Kelch-like protein 25, Ectoderm-neural cortex protein 2, ENC-2, KLHL25, ENC2

Dilution WB~~1/500 - 1/2000 E~~N/A

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions KLHL25 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

KLHL25 Antibody - Protein Information



Name KLHL25 {ECO:0000303|PubMed:22578813, ECO:0000312|HGNC:HGNC:25732}

Function

Substrate-specific adapter of a BCR (BTB-CUL3-RBX1) E3 ubiquitin ligase complex involved in various processes, such as translation homeostasis and lipid synthesis (PubMed:22578813, PubMed:27664236, PubMed:27664236, PubMed:34491895). The BCR(KLHL25) ubiquitin ligase complex acts by mediating ubiquitination of hypophosphorylated EIF4EBP1 (4E-BP1): ubiquitination and subsequent degradation of hypophosphorylated EIF4EBP1 (4E-BP1) probably serves as a homeostatic mechanism to maintain translation and prevent eIF4E inhibition when eIF4E levels are low (PubMed:22578813). The BCR(KLHL25) complex does not target EIF4EBP1 (4E-BP1) when it is hyperphosphorylated or associated with eIF4E (PubMed:22578813). The BCR(KLHL25) complex also acts as a regulator of lipid synthesis by mediating ubiquitination and degradation of ACLY, thereby inhibiting lipid synthesis (PubMed:27664236, PubMed:34491895). BCR(KLHL25)-mediated degradation of ACLY promotes fatty acid oxidation and is required for differentiation of inducible regulatory T (iTreg) cells (PubMed:34491895).

KLHL25 Antibody - Protocols

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

- <u>Western Blot</u>
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- <u>Cell Culture</u>

KLHL25 Antibody - Images





Figure 1: Western blot analysis using KLHL25 mAb against KLHL25(AA: 2-230)-hlgGFc transfected HEK293 cell.

KLHL25 Antibody - References

1. BMC Med Genet. 2007 Sep 19;8 Suppl 1:S13. 2. Genome Res. 2004 Oct;14(10B):2136-44.