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KLHL25 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1418a

Product Information

Application	WB, E
Primary Accession	Q9H0H3
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1B7
Isotype	IgG2b
Calculated MW	65923
Description	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.

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.

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: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).

References

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

Images

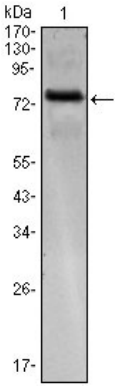


Figure 1: Western blot analysis using KLHL25 mAb against KLHL25(AA: 2-230)-hIgGFc transfected HEK293 cell.

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