10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KLHL12 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1411a

Product Information

Application	WB, E
Primary Accession	Q53G59
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	2G2
Isotype	IgG1
Calculated MW	63277
Description	Serves as a substrate-specific adapter for the CUL3-based ubiquitin-protein E3 ligase complex. Negatively regulates the Wnt signaling pathway via the targeted ubiquitination and subsequent proteolysis of DVL3.Tissue specificity: Highly expressed in testis and at lower levels in the submandibular salivary gland.
Immunogen	Purified recombinant fragment of human KLHL12 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	59349
Other Names	Kelch-like protein 12, CUL3-interacting protein 1, DKIR homolog, hDKIR, KLHL12, C3IP1
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	KLHL12 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	KLHL12
Synonyms	C3IP1 {ECO:0000303|Ref.1}
Function	Substrate-specific adapter of a BCR (BTB-CUL3-RBX1) E3 ubiquitin ligase

	complex that acts as a negative regulator of Wnt signaling pathway and ER-Golgi transport (PubMed:22358839, PubMed:27565346). The BCR(KLHL12) complex is involved in ER-Golgi transport by regulating the size of COPII coats, thereby playing a key role in collagen export, which is required for embryonic stem (ES) cells division: BCR(KLHL12) acts by mediating monoubiquitination of SEC31 (SEC31A or SEC31B) (PubMed:22358839, PubMed:27565346). The BCR(KLHL12) complex is also involved in neural crest specification: in response to cytosolic calcium increase, interacts with the heterodimer formed with PEF1 and PDCD6/ALG-2, leading to bridge together the BCR(KLHL12) complex and SEC31 (SEC31A or SEC31B), promoting monoubiquitination of SEC31 and subsequent collagen export (PubMed:27716508). As part of the BCR(KLHL12) complex, also acts as a negative regulator of the Wnt signaling pathway by mediating ubiquitination and subsequent proteolysis of DVL3 (PubMed:16547521). The BCR(KLHL12) complex also mediates polyubiquitination of DRD4 and PEF1, without leading to degradation of these proteins (PubMed:18303015, PubMed:20100572, PubMed:27716508).
Cellular Location	Cytoplasmic vesicle, COPII-coated vesicle
Tissue Location	Ubiquitously expressed. Highly expressed in testis and at lower levels in the submandibular salivary gland

References

1. Exp Cell Res. 2004 Oct 15;300(1):72-83. 2. Gene. 1994 Jan 28;138(1-2):171-4.

Images

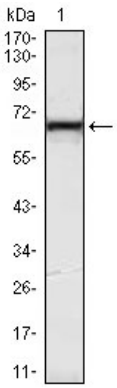


Figure 1: Western blot analysis using KLHL12 mouse mAb against Hela (1) cell lysate.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.