KLHL25 Antibody

Cat. No. CP10340

Applications:	**WB**
Detected MW:	**65 kDa**
Species & Reactivity:	**Human, Mouse, Rat**
Isotype:	**Mouse IgG1**

BACKGROUND

The Kelch-related proteins are a superfamily of proteins conserved in a wide range of organisms, from viruses to mammals. At least 60 Kelch-related proteins have been identified. The kelch motif was discovered as a sixfold tandem element in the sequence of the *Drosophila* kelch ORF1 protein. The repeated kelch motifs predict a conserved tertiary structure, a β-propeller. This module is a protein–protein interaction motif that is found throughout eukaryotes. It determines a unique tri-dimensional fold with a large interaction surface. The exposed residues are highly variable and can permit dimerization and oligomerization, as well as interaction with a number of other proteins. Kelch or BTB-containing proteins are numerous and control cellular processes that range from actin dynamics to cell-cycle regulation. Rearrangement of the actin-based cytoskeleton is regulated by a large number of actin-binding proteins. The kelch-related proteins are believed to be important for the maintenance of the ordered cytoskeleton. The Drosophila Kelch proteins colocalize with actin filaments in a structure called the ring canal, which bridges 15 nurse cells and the oocyte. Drosophila Kelch protein plays an important role in maintaining actin organization during the development of ring canals. The Kelch-related proteins have diverse functions in cell morphology, cell organization, and gene expression, and function in multiprotein complexes through contact sites in their β-propeller domains. Recently, a new member of the BTB/Kelch repeat family, gigaxonin, was reported to be a pathological target for neurodegenerative disorders in which alterations were found to contain multiple mutations in the Kelch repeats in the neurofilament network. Alterations and mutations of these proteins were found in brain tumors and neurodegenerative disorders.[1] In addition, Kelch or BTB-containing proteins are also involved in transcriptional regulation Recent work has showed that, in spite of their high sequence divergence and apparently unrelated functions, many BTB-containing proteins have at least one shared role: the recruitment of degradation targets to E3 ubiquitin ligase complexes.[2]

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.[3]

References:
1. Seng, S. et al: Mol. Cell. Biol. 26:8371-84, 2006
2. Perez-Torrado, R. et al: BioEssays 28: 1194–1202, 2006
3. Kruger, A. et al: Genome Biol. 8:R229, 2007

TECHNICAL INFORMATION

Source:
KLHL25 Antibody is a mouse monoclonal antibody raised against recombinant human KLHL25 fragments expressed in *E. coli*.

Specificity and Sensitivity:
This antibody detects endogenous KLHL25 proteins without cross-reactivity with other family members.

Storage Buffer: PBS and 30% glycerol

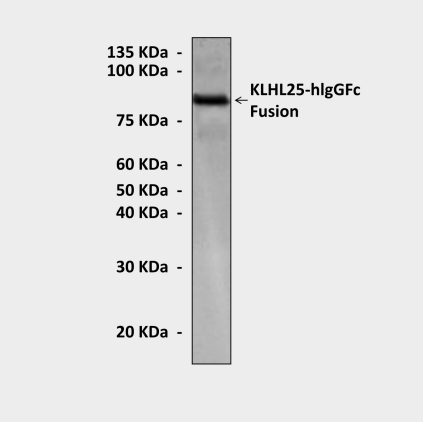
Storage:
Store at -20°C for at least one year. Store at 4°C for frequent use. Avoid repeated freeze-thaw cycles.

APPLICATIONS

Application:	*Dilution:
WB	1:1000
IP	n/d
IHC	n/d
ICC	n/d
FACS	n/d

**Optimal dilutions must be determined by end user.*

QUALITY CONTROL DATA



Western Blot detection of KLHL25-hIgGFc fusion proteins in HEK293 cell lysate containing recombinant human KLHL25-hIgGFc fusion proteins using KLHL25 Antibody.