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PEF1 Antibody (Center)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AW5584

Product Information

Application	WB
Primary Accession	Q9UBV8
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	30381
Isotype	Rabbit IgG
Antigen Source	HUMAN

Additional Information

Gene ID	553115
Antigen Region	95-121
Other Names	Peflin, PEF protein with a long N-terminal hydrophobic domain, Penta-EF hand domain-containing protein 1, PEF1, ABP32
Dilution	WB~~1:1000
Target/Specificity	This PEF1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 95-121 amino acids from the Central region of human PEF1.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	PEF1 Antibody (Center) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	PEF1 (HGNC:30009)
Synonyms	ABP32
Function	Calcium-binding protein that acts as an adapter that bridges unrelated

proteins or stabilizes weak protein-protein complexes in response to calcium. Together with PDCD6, acts as a calcium-dependent adapter for the BCR(KLHL12) complex, a complex involved in endoplasmic reticulum (ER)-Golgi transport by regulating the size of COPII coats (PubMed:27716508). In response to cytosolic calcium increase, the heterodimer formed with PDCD6 interacts with, and bridges together the BCR(KLHL12) complex and SEC31 (SEC31A or SEC31B), promoting monoubiquitination of SEC31 and subsequent collagen export, which is required for neural crest specification (PubMed:27716508). Its role in the heterodimer formed with PDCD6 is however unclear: some evidence shows that PEF1 and PDCD6 work together and promote association between PDCD6 and SEC31 in presence of calcium (PubMed:27716508). Other reports show that PEF1 dissociates from PDCD6 in presence of calcium, and may act as a negative regulator of PDCD6 (PubMed:11278427). Also acts as a negative regulator of ER-Golgi transport; possibly by inhibiting interaction between PDCD6 and SEC31 (By similarity).

Cellular Location

Cytoplasm. Endoplasmic reticulum {ECO:0000250|UniProtKB:Q641Z8}. Membrane; Peripheral membrane protein. Cytoplasmic vesicle, COPII-coated vesicle membrane; Peripheral membrane protein. Note=Membrane-associated in the presence of Ca(2+) (PubMed:11278427). Localizes to endoplasmic reticulum exit site (ERES) (By similarity). {ECO:0000250|UniProtKB:Q641Z8, ECO:0000269|PubMed:11278427}

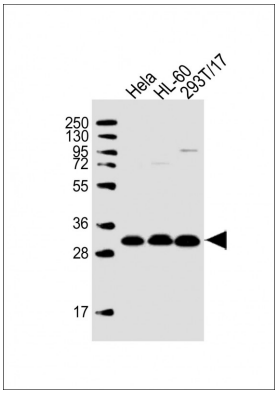
Background

This gene encodes a calcium-binding protein belonging to the penta-EF-hand protein family. The encoded protein has been shown to form a heterodimer with the programmed cell death 6 gene product and may modulate its function in Ca(2+) signaling. Alternative splicing results in multiple transcript variants and a pseudogene has been identified on chromosome 1.

References

Lamesch, P., et al. Genomics 89(3):307-315(2007)
Hansen, C., et al. FEBS Lett. 545 (2-3), 151-154 (2003) :
Satoh, H., et al. Biochim. Biophys. Acta 1600 (1-2), 61-67 (2002) :
Kitaura, Y., et al. Arch. Biochem. Biophys. 399(1):12-18(2002)
Kitaura, Y., et al. J. Biol. Chem. 276(17):14053-14058(2001)

Images



All lanes : Anti-PEF1 Antibody (Center) at 1:1000 dilution Lane 1: Hela whole cell lysate Lane 2: HL-60 whole cell lysate Lane 3: 293T/17 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 30 kDa Blocking/Dilution buffer: 5% NFDM/TBST.