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KD-Validated Anti-PEF1 Rabbit Monoclonal Antibody

Rabbit monoclonal antibody
Catalog # AGI1674

Specification

KD-Validated Anti-PEF1 Rabbit Monoclonal Antibody - Product Information

Application	**WB, FC**
Primary Accession	Q9UBV8
Reactivity	**Rat, Human, Mouse**
Clonality	**Monoclonal**
Isotype	**Rabbit IgG**
Calculated MW	**Predicted, 30 kDa , observed, 30 kDa KDa**
Gene Name	**PEF1**
Aliases	**PEF1; Penta-EF-Hand Domain Containing 1; Peflin; PEF1A; PEF Protein With A Long N-Terminal Hydrophobic Domain; ABP32; Epididymis Secretory Sperm Binding Protein; Penta-EF Hand Domain-Containing Protein 1**
Immunogen	**A synthesized peptide derived from human PEF1**

KD-Validated Anti-PEF1 Rabbit Monoclonal Antibody - Additional Information

Gene ID	**553115**

Other Names
Peflin, PEF protein with a long N-terminal hydrophobic domain, Penta-EF hand domain-containing protein 1 {ECO:0000312|HGNC:HGNC:30009}, PEF1 (HGNC:30009), ABP32

KD-Validated Anti-PEF1 Rabbit Monoclonal Antibody - 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).

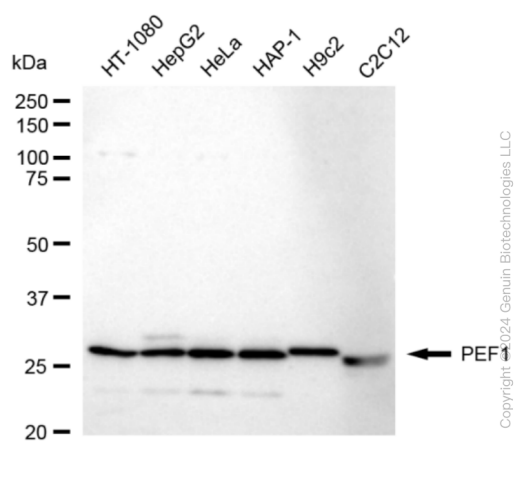
Cellular Location
Cytoplasm. Endoplasmic reticulum {ECO:0000250|UniProtKB:Q641Z8}. Membrane; Peripheral membrane protein. Cytoplasmic vesicle, COPII-coated vesicle membrane; Peripheral membrane protein. Note=Membrane-associated in the presence of Ca(2+) (PubMed:11278427). Localizes to endoplasmic reticulum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

KD-Validated Anti-PEF1 Rabbit Monoclonal Antibody - Protocols

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

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

KD-Validated Anti-PEF1 Rabbit Monoclonal Antibody - Images



Western blotting analysis using anti-PEF1 antibody (Cat#AGI1674). Total cell lysates (30 µg) from various cell lines were loaded and separated by SDS-PAGE. The blot was incubated with anti-PEF1 antibody (Cat#AGI1674, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.

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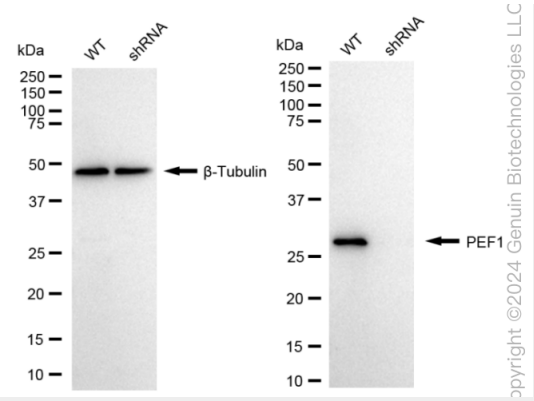
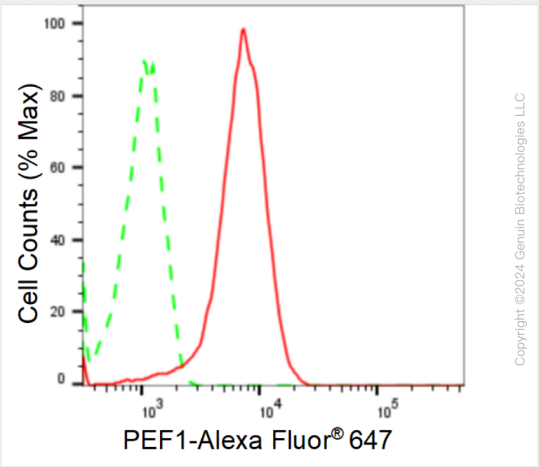


Western blotting analysis using anti-PEF1 antibody (Cat#AGI1674). PEF1 expression in wild type (WT) and PEF1 shRNA knockdown (KD) HeLa cells with 20 µg of total cell lysates. β-Tubulin serves as a loading control. The blot was incubated with anti-PEF1 antibody (Cat#AGI1674, 1:5,000) and HRP-conjugated goat anti-rabbit secondary antibody respectively.



Flow cytometric analysis of PEF1 expression in Hela cells using anti-PEF1 antibody (Cat#AGI1674, 1:2,000). Green, isotype control; red, PEF1.