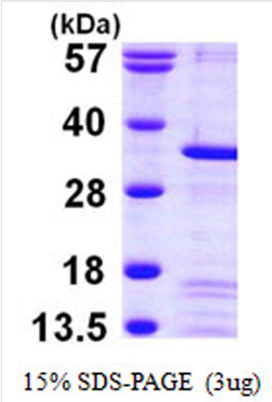
PEF1 Recombinant Protein

PRODUCT OVERVIEW

Product Name	PEF1, Recombinant Protein
Full Product Name	PEF1, 1-284aa, Human, His tag, E Coli
Product Gene Name	PEF1 recombinant protein
Product Synonym Names	Penta-EF-hand domain containing 1; ABP32; PEF1A
Sequence	MRGSHHHHHH GMASMTGGQQ MGRDLYDDDD KDRWGSMASY PYRQGCPGAA GQAPGAPPGS YYPGPPNSGG QYGSGLPPGG GYGGPAPGGP YGPPAGGGPY GHPNPGMFPS GTPGGPYGGA APGGPYGQPP PSSYGAQQPG LYGQGGAPPN VDPEAYSWFQ SVDSDHSGYI SMKELKQALV NCNWSSFNDE TCLMMINMFD KTKSGRIDVY GFSALWKFIQ QWKNLFQQYD RDRSGSISYT ELQQALSQMG YNLSPQFTQL LVSRYCPRSA NPAMQLDRFI QVCTQLQVLT EAFREKDTAV QGNIRLSFED FVTMTASRML
Host	E Coli
Form/Format	Liquid. In 20mM Tris-HCl Buffer (pH 8.0) containing 1mM DTT, 50% glycerol, 0.2M NaCl
Purity/Purification	> 85% by SDS-PAGE
Concentration	0.25 mg/ml (determined by Bradford assay) (lot specific)
Preparation and Storage	Can be stored at 4 degree C short term (1-2 weeks). For long term storage, aliquot and store at -20 degree C or -70 degree C. Avoid repeated freezing and thawing cycles.
Molecular Weight	34.5 kDa (320aa), confirmed by MALDI-TOF
OMIM	AB026628 mRNA
3D Structure	ModBase 3D Structure for Q9UBV8
Antigen Species	Human
Tag Information	His-tag
Product Categories/Family for PEF1 recombinant protein	Signal Transduction
Applications Tested/Suitable for PEF1 recombinant protein	SDS-PAGE
Related Product Information for PEF1 recombinant protein	Penta-EF-hand domain containing 1, also known as PEF1, belongs to the penta-EF-hand protein family, which shares similarities to the apoptosis linked gene ALG-2. PEF1 heterodimerizes with PDCD6/ALG2 and dissociates from PDCD6/ALG2 in the presence of Ca (2+). Also, PEF1 proteins bind calcium and participate in a variety of calcium-dependent processes in vertebrates. Recombinant human PEF1 protein, fused to His-tag at N-terminus, was expressed in E Coli and purified by using conventional chromatography techniques.
Product References and Citations for PEF1 recombinant protein	Vernarecci S., et al. (2007) Mol Microbiol. 65 (4):1122-38.; Kitaura Y., et al. (2002) Arch Biochem Biophys. 399 (1):12-8.
Other Notes	Small volumes of PEF1 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for PEF1 purchase	MBS203818 is a recombinant protein targeting PEF1. Also known as PEF1, 1-284aa, Human, His tag, E Coli. Host: E Coli.



SDS-Page of PEF1 recombinant protein

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PEF1. It may not necessarily be applicable to this product.

NCBI GI #	6912582
NCBI GeneID	553115
NCBI Accession #	NP_036524
UniProt Primary Accession #	Q9UBV8
UniProt Related Accession #	Q9UBV8
GenBank Nucleotide #	NM_012392.3
NCBI Official Full Name	peflin isoform 1
NCBI Official Synonym Full Names	penta-EF-hand domain containing 1
NCBI Official Symbol	PEF1
NCBI Official Synonym Symbols	ABP32; PEF1A
UniProt Protein Name	Peflin
UniProt Synonym Protein Names	PEF protein with a long N-terminal hydrophobic domain
Protein Family	Peflin
UniProt Gene Name	PEF1
NCBI Protein Information	peflin
NCBI Summary for PEF1	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.[provided by RefSeq, May 2010]
UniProt Comments for PEF1	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 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 evidences show 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 ().

Research Articles on PEF1	**1.** This work identifies for the first time a clear steady state role for a PEF protein in ER-to-Golgi transport-peflin is a negative regulator of transport.
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