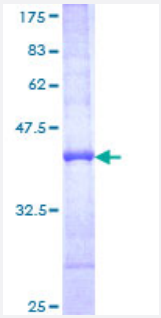
PLEC1 (Human) Recombinant Protein (Q01)

Catalog # H00005339-Q01 Size 25 ug, 10 ug

Applications



Specification

Product Description	Human PLEC1 partial ORF (NP_000436, 4384 a.a. - 4493 a.a.) recombinant protein with GST-tag at N-terminal.
Sequence	CGFEDPRTKTKMSAAQALKKGWLYYEAGQRFLEVQYLTGGLIEPDTPGRVPLDEALQRGTVDAR TAQKLRDVGAYSKYLTCPKTKLKISYKDALDRSMVEEGTGLRLLEA
Host	Wheat Germ (in vitro)
Theoretical MW (kDa)	37.84
Interspecies Antigen Sequence	Mouse (98); Rat (98)
Preparation Method	*in vitro* wheat germ expression system
Purification	Glutathione Sepharose 4 Fast Flow
Quality Control Testing	12.5% SDS-PAGE Stained with Coomassie Blue.
Storage Buffer	50 mM Tris-HCl, 10 mM reduced Glutathione, pH=8.0 in the elution buffer.
Storage Instruction	Store at -80°C. Aliquot to avoid repeated freezing and thawing.
Note	Best use within three months from the date of receipt of this protein.

Applications

- Enzyme-linked Immunoabsorbent Assay
- Western Blot (Recombinant protein)
- Antibody Production
- Protein Array

Gene Info — PLEC1

Entrez GeneID	5339
GeneBank Accession#	NM_000445
Protein Accession#	NP_000436
Gene Name	PLEC1
Gene Alias	EBS1, EBSO, HD1, PCN, PLEC1b, PLTN
Gene Description	plectin 1, intermediate filament binding protein 500kDa
Omim ID	131950 226670 601282
Gene Ontology	Hyperlink

Gene Summary	Plectin is a prominent member of an important family of structurally and in part functionally related proteins, termed plakins or cytolinkers, that are capable of interlinking different elements of the cyt oskeleton. Plakins, with their multi-domain structure and enormous size, not only play crucial roles in maintaining cell and tissue integrity and orchestrating dynamic changes in cytoarchitecture and cell shape, but also serve as scaffolding platforms for the assembly, positioning, and regulation of signaling complexes (for reviews see PMID: 9701547, 11854008 and 17499243). Plectin is expr essed as several protein isoforms in a wide range of cell types and tissues from a single gene loc ated on chromosome 8 (PMID: 8633055, 8698233). The plectin gene locus in mouse on chromos ome 15 has been analyzed in detail (PMID: 10556294, 14559777), revealing a genomic exon-intr on organization with well over 40 exons spanning over 62 kb and an unusual 5' transcript complexi ty of plectin isoforms. Eleven exons (1-1j) have been identified that alternatively splice directly into a common exon 2 which is the first exon to encode plectin's highly conserved actin binding domai n (ABD). Three additional exons (-1, 0a, and 0) splice into an alternative first coding exon (1c), an d two additional exons (2alpha and 3alpha) are optionally spliced within the exons encoding the a cting binding domain (exons 2-8). Analysis of the human locus has identified eight of the eleven alt ernative 5' exons found in mouse and rat (PMID: 14672974). Furthermore, isoforms lacking the ce ntral rod domain encoded by exon 31 have been detected in mouse and rat (PMID:10556294, 91 77781), and as judged by molecular size, have also been detected in human on the protein level (PMID: 11441066, 10780662). It has been shown that the short alternative amino-terminal sequen ces encoded by the different first exons direct the targeting of the various isoforms to distinct subc ellular locations (PMID: 14559777). As the expression of specific plectin isoforms was found to b e dependent on cell type (tissue) and stage of development (PMID: 10556294, 12542521, 17389 230) it appears that each cell type (tissue) contains a unique set (proportion and composition) of plectin isoforms, as if custom-made for specific requirements of the particular cells. Concordantly, individual isoforms were found to carry out distinct and specific functions (PMID: 14559777, 1254 2521, 18541706). In 1996 a number of groups reported that patients
Other Designations	epidermolysis bullosa simplex 1 (Ogna)|hemidesmosomal protein 1|plectin 1|plectin 1, intermedia te filament binding protein, 500kD