DST Protein, Human (P.pastoris, His)

Cat. No.:	HY-P71840
Synonyms:	DST; BPAG1; DMH; DT; Dystonia musculorum protein; Hemidesmosomal plaque protein
Species:	Human
Source:	P. pastoris
Accession:	Q03001 (1M-195G)
Gene ID:	667
Molecular Weight:	Approximately 23.7 kDa

PROPERTIES

AA Sequence	MHSSSYSYRS SDSVFSNTTS TRTSLDSNEN LLLVHCGPTL INSCISFGSE SFDGHRLEML QQIANRVQRD SVICEDKLIL AGNALQSDSK RLESGVQFQN EAEIAGYILE CENLLRQHVI DVQILIDGKY YQADQLVQRV AKLRDEIMAL RNECSSVYSK GRILTTEQTK LMISGITQSL NSGFAQTLHP SLTSG
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in Tris-based buffer, 50% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	DST Protein serves as a crucial cytoskeletal linker, integrating intermediate filaments, actin, and microtubule cytoskeleton networks. Its role varies across cell types, anchoring intermediate filaments to the actin cytoskeleton in neural and muscle cells or connecting keratin-containing intermediate filaments to hemidesmosomes in epithelial cells. DST Protein may self-aggregate to form filaments or a two-dimensional mesh. In sensory neurons, it regulates the organization and stability of the microtubule network, facilitating axonal transport. Additionally, it mediates the docking of the dynein/dynactin motor complex to vesicle cargos for retrograde axonal transport through interactions with TMEM108 and DCTN1. In epithelial cells, DST Protein plays a structural role in assembling hemidesmosomes, anchoring keratin-containing intermediate filaments to the inner plaque and contributing to the regulation of keratinocyte polarity and motility, particularly in mediating integrin

	ITGB4's control of RAC1 activity.

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