

EED Protein, Human, Recombinant (His & GST)

General Information

Synonyms:	HEED;WAIT1;embryonic ectoderm development
Protein Construction:	A DNA sequence encoding the human EED (O75530-1) (Met 1-Arg 441) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	O75530-1
Molecular Weight:	78 kDa (predicted); 75-85 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 93 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/ μ g of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing 20 mM Tris, 500 mM NaCl, pH 8.0, 2 mM GSH, 10% gly. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

EED is essential for regulating the repressive histone modification, histone 3 lysine 27 tri-methylation (H3K27me3) at many developmental genes. EED depletion significantly impeded erythroid maturation. EED depletion impaired the generation of hematopoietic stem cells. The function of EED within polycomb repressive complex 2 (PRC2) is mediated by a complex network of protein-protein interactions. The targeted disruption of EED's reader function can lead to allosteric inhibition of PRC2 catalytic activity. Eed(Delta/Delta) HSPCs exhibited increased attachment

to a major extracellular matrix component, fibronectin. Thus, EED deficiency increases proliferation on one side but promotes quiescence possibly by enhanced adhesion to the hematopoietic niche on the other, and these conflicting events would lead to abnormal differentiation and functional defect of Eed(Delta/Delta) HSPCs.

Reference

- Ura H, et al. (2011) Eed/Sox2 regulatory loop controls ES cell self-renewal through histone methylation and acetylation. *EMBO J.* 30(11): 2190-204.
- Montgomery ND, et al. (2007) Molecular and functional mapping of EED motifs required for PRC2-dependent histone methylation. *J Mol Biol.* 374(5): 1145-57.
- Jin Q, et al. (2003) The protein phosphatase-1 (PP1) regulator, nuclear inhibitor of PP1 (NIPP1), interacts with the polycomb group protein, embryonic ectoderm development (EED), and functions as a transcriptional repressor. *J Biol Chem.* 278(33): 30677-85.
- Showell C, et al. (2002) Identification of putative interaction partners for the Xenopus Polycomb-group protein Xeed. *Gene.* 291(1-2): 95-104.
- Rinchik EM, et al. (1993) N-ethyl-N-nitrosourea-induced prenatally lethal mutations define at least two complementation groups within the embryonic ectoderm development (eed) locus in mouse chromosome 7. *Mamm Genome.* 4(7): 349-53.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

This product is for Research Use Only · Not for Human or Veterinary or Therapeutic Use

Tel: 781-999-4286 E_mail: info@targetmol.com Address: 34 Washington Street, Wellesley Hills, MA 02481