abcam

Product datasheet

Recombinant Human Ikaros protein ab169877

Description

Product name	Recombinant Human Ikaros protein
Purity	> 90 % SDS-PAGE. ab169877 was expressed in E. coli as inclusion bodies, refolded and chromatographically purified.
Expression system	Escherichia coli
Accession	Q13422
Protein length	Full length protein
Animal free	No
Nature	Recombinant
Species	Human
Sequence	MASMTGGQQMGRGHHHHHHGNLYFQGGEFDADEGQDM SQVSGKESPPVSD TPDEGDEPMPIPEDLSTTSGGQQSSKSDRVVASNVKVET QSDEENGRACE MNGEECAEDLRMLDASGEKMNGSHRDQGSSALSGVGGI RLPNGKLKCDIC GIICIGPNVLMVHKRSHTGERPFQCNQCGASFTQKGNLLR HIKLHSGEKP FKCHLCNYACRRRDALTGHLRTHSVGKPHKCGYCGRSYK QRSSLEEHKER CHNYLESMGLPGTLYPVIKEETNHSEMAEDLCKIGSERSL VLDRLASNVA KRKSSMPQKFLGDKGLSDTPYDSSASYEKENEMMKSHV MDQAINNAINYL GAESLRPLVQTPPGGSEVVPVISPMYQLHKPLAEGTPRS NHSAQDSAVEN LLLLSKAKLVPSEREASPSNSCQDSTDTESNNEEQRSGLI YLTNHIAPHA RNGLSLKEEHRAYDLLRAASENSQDALRVVSTSGEQMKV YKCEHCRVLFL DHVMYTIHMGCHGFRDPFECNMCGYHSQDRYEFSSHITR GEHRFHMS
Predicted molecular weight	61 kDa including tags
Amino acids	1 to 519

Tags	His tag N-Terminus , T7 tag N-Terminus

Specifications

Our **Abpromise guarantee** covers the use of **ab169877** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Applications	SDS-PAGE
Form	Liquid

Preparation and Storage

Stability and Storage	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles. pH: 8.00 Constituent: 0.32% Tris-HCl buffer Contains NaCl, KCl, EDTA, arginine, DTT and glycerol.

General Info

Function	Transcription regulator of hematopoietic cell differentiation (PubMed:17934067). Binds gamma-satellite DNA (PubMed:17135265, PubMed:19141594). Plays a role in the development of lymphocytes, B- and T-cells. Binds and activates the enhancer (delta-A element) of the CD3-delta gene. Repressor of the TDT (fikzfterminal deoxynucleotidyltransferase) gene during thymocyte differentiation. Regulates transcription through association with both HDAC-dependent and HDAC-independent complexes. Targets the 2 chromatin-remodeling complexes, NuRD and BAF (SWI/SNF), in a single complex (PYR complex), to the beta-globin locus in adult erythrocytes. Increases normal apoptosis in adult erythroid cells. Confers early temporal competence to retinal progenitor cells (RPCs) (By similarity). Function is isoform-specific and is modulated by dominant-negative inactive isoforms (PubMed:17135265, PubMed:17934067).
Tissue specificity	Abundantly expressed in thymus, spleen and peripheral blood Leukocytes and lymph nodes. Lower expression in bone marrow and small intestine.
Involvement in disease	Defects in IKZF1 are frequent occurrences (28.6%) in acute lymphoblasic leukemia (ALL). Such alterations or deletions lead to poor prognosis for ALL. Chromosomal aberrations involving IKZF1 are a cause of B-cell non-Hodgkin lymphomas (B-cell NHL). Translocation t(3;7)(q27;p12), with BCL6.
Sequence similarities	Belongs to the Ikaros C2H2-type zinc-finger protein family. Contains 6 C2H2-type zinc fingers.
Domain	The N-terminal zinc-fingers 2 and 3 are required for DNA binding as well as for targeting IKFZ1 to pericentromeric heterochromatin. The C-terminal zinc-finger domain is required for dimerization.
Post-translational modifications	Phosphorylation controls cell-cycle progression from late G(1) stage to S stage. Hyperphosphorylated during G2/M phase. Dephosphorylated state during late G(1) phase. Phosphorylation on Thr-140 is required for DNA and pericentromeric location during mitosis. CK2 is the main kinase, in vitro. GSK3 and CDK may also contribute to phosphorylation of the C-terminal serine and threonine residues. Phosphorylation on these C-terminal residues reduces the DNA-binding ability. Phosphorylation/dephosphorylation events on Ser-13 and Ser-295 regulate TDT expression during thymocyte differentiation. Dephosphorylation by protein phosphatase 1

	regulates stability and pericentromeric heterochromatin location. Phosphorylated in both lymphoid and non-lymphoid tissues (By similarity). Phosphorylation at Ser-361 and Ser-364 downstream of SYK induces nuclear translocation. Sumoylated. Simulataneous sumoylation on the 2 sites results in a loss of both HDAC-dependent and HDAC-independent repression. Has no effect on pericentromeric heterochromatin location. Desumoylated by SENP1. Polyubiquitinated.
Cellular localization	Cytoplasm; Nucleus. In resting lymphocytes, distributed diffusely throughout the nucleus. Localizes to pericentromeric heterochromatin in proliferating cells. This localization requires DNA binding which is regulated by phosphorylation / dephosphorylation events and Nucleus. In resting lymphocytes, distributed diffusely throughout the nucleus. Localizes to pericentromeric heterochromatin in proliferating cells. This localization requires DNA binding which is regulated by phosphorylation / dephosphorylation events (By similarity).

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