# Recombinant Human ASH1L protein, GST-tagged

**Cat. No.** ASH1L-47H **Lot. No.** (See product label)

## SPECIFICATION

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| **Product Overview** | Recombinant Human ASH1L protein, fused with N-terminal GST tag was expressed in E.coli. |
| **Species** | Human |
| **Source** | E.coli |
| **ProteinLength** | 2022-2302 |
| **Description** | ASH1L is a large , multi-domain protein associated with actively transcribed regions of chromatin, ASH1L is the human homolog of Drosophila Ash1, a Trithorax group protein. Like its counterpart in Drosophila, ASH1L contains a SET histone methyltransferase domain and has been found to play a role in the regulation of Hox gene expression. Although the ASH1L SET domain has been shown in vitro to methylate histone peptides on lysine-4 of histone H3 (H3K4), ASH1L is an H3K36 methyltransferase both in vivo and in vitro with nucleosomes as substrate. Recruitment of ASH1L by the ncRNA DBE-T to the chromosome 4q35 locus associated with FSHD (facioscapulohumeral muscular dystrophy) leads to increased H3K36me2 and inappropriate gene derepression at the FSHD locus. In a possible positive feedback loop, ASH1L increases expression of DBE-T itself, suggesting ASH1L's methyltransferase activity or its interaction with DBE-T as potential therapeutic targets for FSHD. |
| **Form** | Solution of purified recombinant protein in 50 mM Tris/HCl, pH 7.5, 150 mM NaCl, 1 |

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| | mM TCEP, 10% (v/v) glycerol |
| **Molecular Mass** | 59.5 kDa |
| **Storage** | Store at -80centigrade. Thaw quickly and store on ice before use. Avoid repeated freezing and thawing cycles. |

## GENE INFORMATION

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| **Gene Name** | ASH1L ash1 (absent, small, or homeotic)-like (Drosophila) [ Homo sapiens ] |
| **Official Symbol** | ASH1L |
| **Synonyms** | ASH1L; ash1 (absent, small, or homeotic)-like (Drosophila); histone-lysine N-methyltransferase ASH1L; ASH1; ASH1L1; huASH1; KMT2H; ASH1-like protein; lysine N-methyltransferase 2H; absent small and homeotic disks protein 1 homolog; probable histone-lysine N-methyltransferase ASH1L; FLJ10504; KIAA1420; |
| **Gene ID** | 55870 |
| **mRNA Refseq** | NM_018489 |
| **Protein Refseq** | NP_060959 |
| **MIM** | 607999 |
| **UniProt ID** | Q9NR48 |
| **Chromosome Location** | 1q22 |
| **Pathway** | Lysine degradation, organism-specific biosystem; Lysine degradation, conserved |

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| | biosystem; Tight junction, organism-specific biosystem; Tight junction, conserved biosystem; |
| **Function** | DNA binding; histone-lysine N-methyltransferase activity; metal ion binding; methyltransferase activity; transferase activity; zinc ion binding; |

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