

ERVW-1 Protein, Human (His-SUMO)

Cat. No.:	HY-P71654
Synonyms:	ERVW-1; ERVWE1; Syncytin-1; Endogenous retrovirus group W member 1; Env-W; Envelope polyprotein gPr73; Enverin
Species:	Human
Source:	E. coli
Accession:	Q9UQF0 (21A-443Q)
Gene ID:	30816
Molecular Weight:	Approximately 63.0 kDa

PROPERTIES

AA Sequence	<pre> A P P P C R C M T S S S P Y Q E F L W R M Q R P G N I D A P S Y R S L S K G T P T F T A H T H M P R N C Y H S A T L C M H A N T H Y W T G K M I N P S C P G G L G V T V C W T Y F T Q T G M S D G G G V Q D Q A R E K H V K E V I S Q L T R V H G T S S P Y K G L D L S K L H E T L R T H T R L V S L F N T T L T G L H E V S A Q N P T N C W I C L P L N F R P Y V S I P V P E Q W N N F S T E I N T T S V L V G P L V S N L E I T H T S N L T C V K F S N T T Y T T N S Q C I R W V T P P T Q I V C L P S G I F F V C G T S A Y R C L N G S S E S M C F L S F L V P P M T I Y T E Q D L Y S Y V I S K P R N K R V P I L P F V I G A G V L G A L G T G I G G I T T S T Q F Y Y K L S Q E L N G D M E R V A D S L V T L Q D Q L N S L A A V V L Q N R R A L D L L T A E R G G T C L F L G E E C C Y Y V N Q S G I V T E K V K E I R D R I Q R R A E E L R N T G P W G L L S Q </pre>
Appearance	Lyophilized powder.
Formulation	Lyophilized after extensive dialysis against solution in 10 mM Tris-HCl, 1 mM EDTA, 6% Trehalose, pH 8.0.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconstitution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH ₂ O.
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	The endogenous retroviral envelope protein ERVW-1 has preserved its inherent fusogenic properties, playing a pivotal role in trophoblast fusion and the establishment of a syncytium during placental morphogenesis. Its capacity for inducing fusion
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is facilitated through the binding of SLC1A4 and SLC1A5. Endogenous envelope proteins, like ERVW-1, may exhibit varied evolutionary fates, maintaining, losing, or altering their original functions over time. Retroviral envelope proteins, comprising a surface protein (SU) for receptor recognition and a transmembrane protein (TM) acting as a class I viral fusion protein, are critical for receptor recognition and membrane fusion in early infection. ERVW-1 likely adopts three conformational states: pre-fusion native state, pre-hairpin intermediate state, and post-fusion hairpin state. In the context of viral and target cell membrane fusion, the coiled coil regions (heptad repeats) transition to a trimer-of-hairpins structure, bringing the fusion peptide close to the ectodomain's C-terminal region—a structural arrangement believed to drive membrane apposition and subsequent fusion.

Caution: Product has not been fully validated for medical applications. For research use only.

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