Tapasin Protein, Human (HEK293, His)

Cat. No.:	HY-P73619
Synonyms:	NGS17; TAPA; Tapasin; TAPATAP-associated protein; TPN; TPSN
Species:	Human
Source:	HEK293
Accession:	O15533 (G21-V414)
Gene ID:	6892
Molecular Weight:	Approximately 45-50 kDa due to the glycosylation.

PROPERTIES

AA Sequence	G P A V I E C W F V E D A S G K G L A K R P G A L L L R Q G P G E P P P R P D L D P E L Y L S V H D P A G A L Q A A F R R Y P R G A P A P H C E M S R F V P L P A S A K W A S G L T P A Q N C P R A L D G A W L M V S I S S P V L S L S S L L R P Q P E P Q Q E P V L I T M A T V V L T V L T H T P A P R V R L G Q D A L L D L S F A Y M P P T S E A A S S L A P G P P P F G L E W R R Q H L G K G H L L L A A T P G L N G Q M P A A Q E G A V A F A A W D D D E P W G P W T G N G T F W L P T V Q P F Q E G T Y L A T I H L P Y L Q G Q V T L E L A V Y K P P K V S L M P A T L A R A A P G E A P P E L L C L V S H F Y P S G G L E V E W E L R G G P G G R S Q K A E G Q R W L S A L R H H S D G S V S L S G H L Q P P P V T T E Q H G A R Y A C R I H H P S L P A S G R S A E V T L E V A G L S G P S L E D S V
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
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. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
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	Tapasin protein assumes a pivotal role in the intricate processes of MHC class I assembly, specifically in the association with transporter associated with antigen processing (TAP) and the formation of MHC class I with peptides during peptide loading.

Forming a heterodimer with PDIA3 through disulfide linkage, tapasin becomes an obligatory mediator in the interaction among newly assembled MHC class I molecules, calreticulin, PDIA3, and TAP. Notably, up to four MHC class I/tapasin complexes bind to a single TAP, as documented in various studies. Furthermore, tapasin exhibits an additional interaction with the HLA-G-B2M complex, a critical engagement that is essential for the loading of high-affinity peptides, elucidating its multifaceted role in the orchestration of MHC class I antigen presentation.

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