

# Recombinant Human SP100 Protein

**For Research Use Only**

## 1. Basic Product Information

Catalog No.: REP50922

Size: 10ug, 100ug

Protein Name: Nuclear autoantigen Sp-100 (Nuclear dot-associated Sp100 protein)  
(Speckled 100 kDa)

Synonym: SP100

UniProt ID: P23497

UniProt Link: [www.uniprot.org/uniprotkb/P23497/entry](http://www.uniprot.org/uniprotkb/P23497/entry)

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 879 AA

Molecular Weight: 100 KD

Protein Tag: C-terminal His6

## 2. Amino Acid Sequence

MAGGGGDLSTRRLNECISPVANEMNHLPAHSHDLQRMFTEDQGVDDRLLYDIVFKHFKRNKVEISN  
AIKKTFFPLEGLRDRDLITNKMFEQSDSCRNLVPVQRRVYNVLSELEKTFNLPVLEALFSDVNMQEY  
PDLIIHYKGFENVIHDKLPLQESEEEEEEREERSGLQLSLEQGTGENSFRSLTWPPSGSPSHAGTTPPE  
NGLSEHPCETEQINAKRKDTTSDKDDSLGSQQTNEQCAQKAEPTECEQIAVQVNNGDAGREMP  
PLPCDEESPEAELHNHGIQINSCSVRLVDIKKEKPFSNSKVEQCAQARTHHNQASDIIVISSEDESGST  
DVDEPLEVFISAPRSEPVINNDNPLESNDEKEGQEATCSRQIVPEPMDFRKLSTFRESFKKRVIGQD  
HDFSESSEEEAPAEASSGALRSKHGEKAPMTSRSTSTWRIPSRKRRFSSSDFSDLSNGEELQETCS  
SSLRRGSGSQPEPENKKCSCVMCFPKGVPQRSQEARTESSQASDMMMDTMDVENNSTLEKHSGKR  
RKKRRHRSKVNGLQRGRKKDRPRKHLTLNNKVQKKRWQQRGRKANTRPLKRRRKRGPRIKPDENI  
NFKQSELPTVTCGEVKGTLYKERFKQGTSSKCIQSEDKKWFTPREFEIEGDRGASKNWKLSIRCGGY  
TLKVLNENKFLPEPPSTRKKRILESHNNTLVDPCEEHKKKNPDASVKFSEFLKKCSETWKTIFAKEKG  
KFEDMAKADKAHYEREMKTYIPPKGEKKKKFKDPNAPKRPLAFLFCSEYRPKIKGEHPGLSIDDV  
VKKLAGMWNNTAAADKQFYEKKAALKKEKYKKDIAAYRAKGKPNASAKKRVVKAESKSKKKKEEEDE  
EDEQEEENEEDDDK

## 3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

## 4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

## 5. Product Description

This product is recombinant Nuclear autoantigen Sp-100 (Nuclear dot-associated Sp100 protein) (Speckled 100 kDa) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

**Protein Function:** Together with PML, this tumor suppressor is a major constituent of the PML bodies, a subnuclear organelle involved in a large number of physiological processes including cell growth, differentiation and apoptosis. Functions as a transcriptional coactivator of ETS1 and ETS2 according to PubMed:11909962. Under certain conditions, it may also act as a corepressor of ETS1 preventing its binding to DNA according to PubMed:15247905. Through the regulation of ETS1 it may play a role in angiogenesis, controlling endothelial cell motility and invasion. Through interaction with the MRN complex it may be involved in the regulation of telomeres lengthening. May also regulate TP53-mediated transcription and through CASP8AP2, regulate FAS-mediated apoptosis. Also plays a role in infection by viruses, including human cytomegalovirus and Epstein-Barr virus, through mechanisms that may involve chromatin and/or transcriptional regulation.

**Subcellular Localization:** Nucleus . Nucleus, PML body . Nucleus, nuclear body . Cytoplasm . Note=Differences in the subnuclear localization of the different isoforms seem to exist and may also be cell cycle- and interferon-dependent. Accumulates in the cytoplasm upon FAS activation.; [Isoform Sp100-C]: Nucleus . Note=Forms a reticulate or track-like nuclear pattern with denser concentrations at the nuclear lamina and surrounding the nucleoli, a pattern reminiscent of heterochromatin-rich regions according to PubMed:11313457.

## 6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.