

Datasheet for ABIN7554000  
**GEN1 Protein (AA 1-908) (His tag)**



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## Overview

Quantity:	1 mg
Target:	GEN1
Protein Characteristics:	AA 1-908
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This GEN1 protein is labelled with His tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB)

## Product Details

Purpose:	Custom-made recombinat GEN1 Protein expressed in mammalian cells.
Sequence:	MGVNDLWQIL EPVKQHIPLR NLGGKTIAMD LSLWVCEAQT VKKMMGSVMK PHLRNLFRI SYLTQMDVKL VFMMEGEPK LKADVISKRN QSRYGSSGKS WSQKTGRSHF KSVLRECLHM LECLGIPWVQ AAGEAEAMCA YLNAGGHVDG CLTNDGDTFL YGAQTVYRNF TMNTKDPHVD CYTMSSISK LGLDRDALVG LAILLGCDYL PKGVPGVGKE QALKLIQILK GQSLLRFN WNETSCNSSP QLLVTKKLAH CSVCSHPGSP KDHENGCRL CKSDKYCEPH DYEYCCPCW HRTEHDRQLS EVENNIKKKA CCEGFPFHE VIEFLLNKD KLVKVIRYQR PDLFFFQRF LEKMEWPNHY ACEKLLVLLT HYDMIERKLG SRNSNQLQPI RIVKTRIRNG VHCFEIEWEK PEHYAMEDKQ HGEFALLTIE EESLFEAAYP EIVAVYQKQK LEIKGKKQKR IKPKENLPE PDEVMSFQSH MTLKPTCEIF HKQNSKLSNG ISPDPTLPQE SISASLNSLL LPKNTPCLN AEQFMSSLRP LAIQQIKAVS KSLISESSQP NTSSHNSVI ADLHLSTIDW EGTSFNSPA IQRNTFSHDL KSEVESELSA IPDGFENIPE QLSCESERYT ANIKKVLDED SDGISPEEHL

## Product Details

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LSGITDLCLQ DLPLKERIFT KLSYPQDNLQ PDVNLKTLIS LSVKESCIAN SGSDCTSHLS  
KDLPGIPLQN ESRDSKILKG DQLLQEDYKV NTSVPYSVSN TVVKTCNVRP PNTALDHSRK  
VDMQTTRKIL MKKSVCLDRH SSDEQSAPVF GKAKYTTQRM KHSSQKHNS HFKESGHNKL  
SSPKIHKET EQCVRSYETA ENEESCFPDS TKSSLSSLQC HKKENNSGTC LDSPLPLRQR  
LKLRFQST **Sequence without tag. The proposed Purification-Tag is based on experiences with the expression system, a different complexity of the protein could make another tag necessary. In case you have a special request, please contact us.**

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### Characteristics:

#### Key Benefits:

- Made to order protein - from design to production - by highly experienced protein experts.
- Protein expressed in mammalian cells and purified in one-step affinity chromatography
- The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins.
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a made-to-order protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

If you are not interested in a full length protein, please contact us for individual protein fragments.

The big advantage of ordering our made-to-order proteins in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

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### Purity:

> 90 % as determined by Bis-Tris Page, Western Blot

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### Grade:

custom-made

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## Target Details

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### Target:

GEN1

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### Alternative Name:

GEN1 ([GEN1 Products](#))

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### Background:

Flap endonuclease GEN homolog 1 (EC 3.1.-.-),FUNCTION: Endonuclease which resolves Holliday junctions (HJs) by the introduction of symmetrically related cuts across the junction point, to produce nicked duplex products in which the nicks can be readily ligated. Four-way DNA intermediates, also known as Holliday junctions, are formed during homologous recombination and DNA repair, and their resolution is necessary for proper chromosome segregation (PubMed:19020614, PubMed:26682650). Cleaves HJs by a nick and counter-nick

## Target Details

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mechanism involving dual coordinated incisions that lead to the formation of ligatable nicked duplex products. Cleavage of the first strand is rate limiting, while second strand cleavage is rapid. Largely monomeric, dimerizes on the HJ and the first nick occurs upon dimerization at the junction (PubMed:26578604). Efficiently cleaves both single and double HJs contained within large recombination intermediates. Exhibits a weak sequence preference for incision between two G residues that reside in a T-rich region of DNA (PubMed:28049850). Has also endonuclease activity on 5'-flap and replication fork (RF) DNA substrates (PubMed:26578604). {ECO:0000269|PubMed:19020614, ECO:0000269|PubMed:26578604, ECO:0000269|PubMed:26682650, ECO:0000269|PubMed:28049850}.

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Molecular Weight: 102.9 kDa

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UniProt: [Q17RS7](#)

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Pathways: [DNA Damage Repair](#)

## Application Details

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Application Notes: In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.

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Restrictions: For Research Use only

## Handling

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Format: Liquid

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Buffer: The buffer composition is at the discretion of the manufacturer.

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Handling Advice: Avoid repeated freeze-thaw cycles.

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Storage: -80 °C

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Storage Comment: Store at -80°C.

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Expiry Date: 12 months