10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

GEN1 Rabbit pAb

Catalog # AP97332

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	Q17RS7
Other Accession	Q17RS7
Predicted	Rat, Pig, Human, Mouse, Horse, Sheep
Host	Rabbit
Clonality	Polyclonal
Calculated MW	102884
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human GEN1
Epitope Specificity	51-150/908
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Belongs to the XPG/RAD2 endonuclease family. GEN subfamily.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Endonuclease which cleaves flap structures at the junction between single-stranded DNA and double-stranded DNA. Specific for 5'-overhanging flap structures in which the 5'-upstream of the flap is completely double-stranded. Prefers the blocked-flap structures similar to those occurring at replication forks, in which the 5' single-strand overhang of the flap is double-stranded.

Additional Information

Gene ID	348654
Other Names	Gen; RGD1559792; GEN_HUMAN; GEN1; 3.1.-.-; GEN1 structure-specific endonuclease; GEN1 Holliday junction 5' flap endonuclease; Gen endonuclease homolog 1 (Drosophila); structure-selective endonuclease GEN1; replication fork endonuclease; 5' flap endonuclease; Holliday junction resolvase
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	GEN1
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 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). Also has endonuclease activity on 5'-flap and replication fork (RF) DNA substrates (PubMed:26578604).
Cellular Location	Nucleus

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.