

Variant: NM_000314.8(PTEN):c.10A>G (p.Ile4Val)

Version: 1.0

CA377781789 [↗](#)

1704153 (ClinVar) [↗](#)

Gene: PTEN ([HGNC:5728](#))

Condition: PTEN hamartoma tumor syndrome ([MONDO:0017623](#))

Inheritance Mode: Autosomal dominant inheritance

UUID: d202d853-b81a-4104-9c45-c962710e0b4f

Approved on: 2023/8/4

Published on: 2023/10/19

HGVS expressions

NM_000314.8:c.10A>G

NM_000314.8(PTEN):c.10A>G (p.Ile4Val)

NC_000010.11:g.87864479A>G

CM000672.2:g.87864479A>G

NC_000010.10:g.89624236A>G

CM000672.1:g.89624236A>G

NC_000010.9:g.89614216A>G

NG_007466.2:g.6041A>G

NG_033079.1:g.3959T>C

ENST00000700029.2:c.10A>G

ENST00000710265.1:c.10A>G

ENST00000472832.3:c.10A>G

ENST00000688922.2:c.10A>G

ENST00000700021.1:c.10A>G

ENST00000700022.1:c.10A>G

ENST00000706954.1:c.10A>G

ENST00000706955.1:c.10A>G

ENST00000686459.1:c.10A>G

ENST00000688158.1:c.10A>G

ENST00000688308.1:c.10A>G

ENST00000693560.1:c.529A>G

ENST00000371953.8:c.10A>G

ENST00000371953.7:c.10A>G

ENST00000462694.1:n.12A>G

ENST00000487939.1:n.31A>G

ENST00000610634.1:c.-93A>G

NM_000314.5:c.10A>G

NM_000314.6:c.10A>G

NM_001304717.2:c.529A>G

NM_001304718.1:c.-696A>G

NM_000314.7:c.10A>G

NM_001304717.5:c.529A>G

NM_001304718.2:c.-696A>G

Uncertain Significance

BS3_Supporting

BP4

PM2_Supporting

PP2

PS2

PTEN VCEP

Not Met criteria codes 4

PP3

PS1

PM1

PM5

Evidence Links 1

Criteria Specification Information

Criteria Specification: ClinGen PTEN Expert Panel Specifications to the ACMG/AMP Variant Interpretation Guidelines for PTEN Version 3.0.0

Criteria Specification Approval History

Criteria Specifications for this VCEP

Evidence submitted by expert panel			
PTEN VCEP			
NM_000314.8(PTEN):c.10A>G (p.Ile4Val) is currently classified as a variant of uncertain significance for PTEN Hamartoma Tumor syndrome in an autosomal dominant manner using modified ACMG criteria (ACMG Classification Rules Specified for PTEN Variant Curation version 3.0.0). Please see a summary of the rules and criteria codes in the “PTEN ACMG Specifications Summary” document (assertion method column). PS2: De novo (both maternity and paternity confirmed) observation in a patient with the disease and no family history (SCV002569820.2). PM2_Supporting: Absent in large sequenced populations OR present at extremely low (<0.00001, 0.001%) allele frequency in the gnomAD cohort. (PMID 27535533). PP2: PTEN is defined by the PTEN Expert Panel as a gene that has a low rate of benign missense variation and where missense variants are a common mechanism of disease. BS3_Supporting: Well-established functional studies show no deleterious effect: Phosphatase activity $\leq$ -1.11 (score = 1.00) per Mighell et al. 2018 (PMID: 29706350). BP4: REVEL score < 0.5 (score=0.294) Using the Bayesian point system (PMID: 29300386) for this variant with conflicting evidence: 1 pathogenic strong, 2 pathogenic supporting and 2 benign supporting codes get 4 + (1*2) +(- 1*2) points = total is 4 (VUS).			
Met criteria codes			
BS3_Supporting			Mighell 2018 score = 1.00 (PMID: 29706350)
			Score = 1.00, PubMed:29706350
BP4			REVEL score < 0.5 (score=0.294)
PM2_Supporting			Absent in large sequenced populations OR present at extremely low (<0.00001, 0.001%) allele frequency in the gnomAD cohort. (PMID 27535533).
PP2			PTEN is defined by the PTEN Expert Panel as a gene that has a low rate of benign missense variation and where missense variants are a common mechanism of disease.
PS2			SCV002569820.2: de novo via WES in child with dev delay and macrocephaly
Not Met criteria codes			
PP3			No code specific comments provided, please refer to the summary above or general recommendations provided in the guideline

PS1			No code specific comments provided, please refer to the summary above or general recommendations provided in the guideline
PM1			No code specific comments provided, please refer to the summary above or general recommendations provided in the guideline
PM5			No code specific comments provided, please refer to the summary above or general recommendations provided in the guideline

Curation History 		
    		
Showing 1 to 1 of 1 rows		

The information on this website is not intended for direct diagnostic use or medical decision-making without review by a genetics professional. Individuals should not change their health behavior solely on the basis of information contained on this website. If you have questions about the information contained on this website, please see a health care professional.