



Name

Sex/Age Unknown/0

Date Received:

Indication Apr 03 2025

Whole Exome Sequencing on the Illumina Novaseq 6000 NGS Platform

Clinical Indication:

- A 0.0 Year(s) old baby with gender - (not specified) born to parents with unknown consanguinity was referred for genetic evaluation. No clinical symptoms / phenotypes were mentioned.

Plausible cause was not identified.

Gene and Transcript	Location	Var iant	Zygosity	OMIM Phenotype	Clinical Significance
chr16:2106263	chr16:2106263		Heterozygous	'POLYCYSTIC KIDNEY DISEASE 1 WITH OR WITHOUT POLYCYSTIC LIVER DISEASE'	A 0.0 Year(s) old baby with gender - (not specified) born to parents with unknown consanguinity was referred for genetic evaluation. No clinical symptoms / phenotypes were mentioned.

^{*}Genetic test results are reported based on the recommendations of American College of Medical Genetics

FLCN:c.1150 1160delGTCCAGTCAGC

A Heterozygous variant NM_001009944.3:c.7531G>A, [NP_001009944.3:p.Ala2511Thr] in PKD1[MIM*601313] gene was identified by Whole Exome Proband-Only analysis. The Heterozygous variations in the PKD1 gene are known to cause Autosomal dominant POLYCYSTIC KIDNEY DISEASE 1 WITH OR WITHOUT POLYCYSTIC LIVER DISEASE [MIM#173900]. This variant is not present in publicly available databases like ['1000 Genomes', 'Genome Aggregation Database Exome (gnomAD_exome)', 'Genome Aggregation Database Genome (gnomAD_genome)', 'Inhouse exome database']. This variant is present in [['Exome Variant Server', '0.0']].

Reviewed by

Mambanlage

Maniewala

Danjawala

.-.ucleome

<u>-.uc1eome</u> Informatics Private Limited



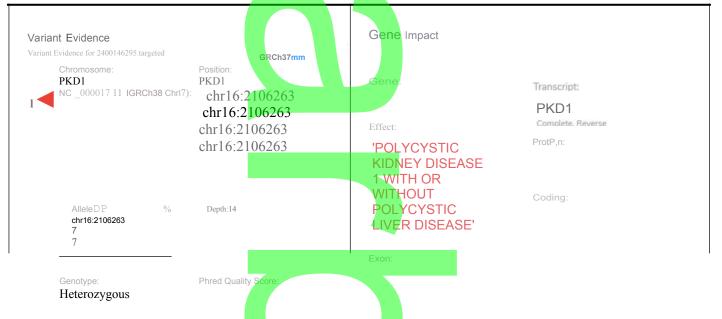


Name Sex/Age

Sex/Age

Date Received: 07-Aug-2024

Indication:



Based on the evidence, this variant Heterozygous
is classified as likely to be 'POLYCYSTIC KIDNEY DISEASE 1 WITH OR WITHOUT POLYCYSTIC LIVER
DISEASE'

<u>variant</u>

OMIM Phenotype:

'POLYCYSTIC KIDNEY DISEASE 1 WITH OR WITHOUT POLYCYSTIC LIVER DISEASE'

Case Specific Recommendations:

- Genetic counselling is advised. For assistance in locating nearby genetic counseling services, please contact the laboratory [Ph.No. -----].
- Validation of the variant detected by Sanger sequencing is recommended.
- Targeted mutation analysis in the parents is recommended to document possible de novo status
 of the variant detected in the proband.

Reviewed by

Dambarlase

adamianala

Danjawala



<u>-.uc1eome</u> Informatics Private Limited





Name
Sex/Age
Date Received: 07-Aug-2024
Indication:

Methodology

To be filled by organization based on the test methodology.

Limitations/Disclaimer

d.static.limitation.data}

Intronic and untranslated region variants are not assessed using this method., The classification of variants may change over time., Although all precautions have been taken during the test, the currently available data indicate that the chances of technical error are 2-3%., For any further questions please contact the laboratory [Ph.No. ------].

Mambanlase

Mariawala

Danjawsla





Name

Sex/Age

Date Received: 07-Aug-2024

Indication:

Variant Classifica	ation as per ACMG
Name	Description
Variant	A change in a gene. This could be disease causing (pathogenic) or not disease causing (benign).
Pathogenic	A disease causing variation in a gene which can explain the patients symptoms has been detected. This usually means that a suspected disorder for which testing had been requested has been confirmed.

References:

- 1. McLaren, William, et al. The Ensembl Variant Effect Predictor. Genome Biology, vol. 17, no. 1, 6 June 2016, p. 122, doi:10.1186/s13059-016-0974-4.
- 2. 1000 Genomes Project Consortium, et al. A Global Reference for Human Genetic Variation. Nature, vol. 526, no. 7571, 2015, pp. 68-74 doi:10.1038/nature15393.
- 3. Karczewski, Konrad J., et al. The ExAC Browser: Displaying Reference Data Information from over 60,000 Exomes. Nucleic Acids Research, vol. 45, no. D1, 2017, pp. D840-D845, doi:10.1093/nar/gkw971.
- 4. Chen, Shamil, et al. A Genomic Mutational Constraint Map Using Variation in 76,156 Human Genomes. Nature, vol. 625, no. 7993, 4 Jan. 2024, pp. 92-100.
- 5. Sherry, Stephen T., et al. dbSNP: The NCBI Database of Genetic Variation. Nucleic Acids Research, vol. 29, no. 1, 1 Jan. 2001, pp. 308-11.
- 6. Amberger, Joanna S., et al. OMIM.org: Online Mendelian Inheritance in Man (OMIM®), an Online Catalog of Human Genes and Genetic Disorders. Nucleic Acids Research, vol. 43, no. D1, 28 Jan. 2015, pp. D789-98.
- 7. Landrum, Melissa J., et al. ClinVar: Public Archive of Interpretations of Clinically Relevant Variants. Nucleic Acids Research, vol. 44, no. D1, 4 Jan. 2016, pp. D862-8.
- 8. Ng, Pauline C., and Steven Henikoff. Predicting Deleterious Amino Acid Substitutions. Genome Research, vol. 11, no. 5, 1 May 2001, pp. 863-74.
- 9. Kumar, Prateek, Steven Henikoff, and Pauline C. Ng. Predicting the Effects of Coding Non-synonymous Variants on Protein Function Using the SIFT Algorithm. Nature Protocols, vol. 4, no. 7, July 2009, pp. 1073-81.
- 10. Adzhubei, Ivan A., et al. A Method and Server for Predicting Damaging Missense Mutations. Nature Methods, vol. 7, no. 4, Apr. 2010, pp. 248-9.

Mambanhase

Alamawala

Danjawala

- 11. Kircher, Martin, et al. A General Framework for Estimating the Relative Pathogenicity of Human Genetic Variants. Nature Genetics, vol. 46, no. 3, Mar. 2014, pp. 310-5.
- 12. Schwarz, Johannes M., et al. Mutation Taster 2: Mutation Prediction for the Deep-Sequencing Age. Nature Methods, vol. 11, no. 4, Apr. 2014, pp. 361-2.
- 13. Quan, Lihua, and Kai Wang. InterVar: Clinical Interpretation of Genetic Variants by ACMG-AMP 2015 Guideline. American Journal of Human Genetics, vol. 100, 2017, pp. 267-80.
- 14. Richards, Sue, et al. Standards and Guidelines for the Interpretation of Sequence Variants: A Joint Consensus Recommendation of the American College of Medical Genetics and Genomics and the Association for Molecular Pathology. Genetics in Medicine, vol. 17, no. 5, May 2015, pp. 405-23.
- 15. Green, Robert C., et al. ACMG Recommendations for Reporting of Incidental Findings in Clinical Exome and Genome Sequencing. Genetics in Medicine, vol. 15, no. 7, July 2013, pp. 565-74.
- 16. Rehm, Heidi L., et al. ACMG Clinical Laboratory Standards for Next-Generation Sequencing. Genetics in Medicine, vol. 15, no. 9, Sept. 2013, pp. 733-47.
- 17. Kalia, Sarah S., et al. Recommendations for Reporting of Secondary Findings in Clinical Exome and Genome Sequencing, 2016 Update (ACMG SF v2.0): A Policy Statement of the American College of Medical Genetics and Genomics. Genetics in Medicine, vol. 19, no. 2, Feb. 2017, pp. 249-55.



- 18. Miller, D. T., et al. Recommendations for Reporting of Secondary Findings in Clinical Exome and Genome Sequencing, 2021 Update: A Policy Statement of the American College of Medical Genetics and Genomics (ACMG). Genetics in Medicine, vol. 23, no. 8, Aug. 2021, pp. 1391-8.
- 19. Raney, Brian J., et al. The UCSC Genome Browser Database: 2024 Update. Nucleic Acids Research, vol. 52, no. D1, 2024, pp. D1082–D1088, https://doi.org/10.1093/nar/gkad987.
- 20. Nassar, Laila R., et al. The UCSC Genome Browser Database: 2023 Update. Nucleic Acids Research, vol. 51, no. D1, 2023, pp. D1188–D1195, https://doi.org/10.1093/nar/gkac1072.
- 21. Thorvaldsdóttir, Helga, James T. Robinson, and Jill P. Mesirov. Integrative Genomics Viewer (IGV): High-Performance Genomics Data Visualization and Exploration. Briefings in Bioinformatics, vol. 14, no. 2, Mar. 2013, pp. 178-92, doi:10.1093/bib/bbs017.
- 22. Gargano, Maria A., et al. The Human Phenotype Ontology in 2024: Phenotypes around the World. Nucleic Acids Research, vol. 52, no. D1, 5 Jan. 2024, pp. D1333-D1346, doi:10.1093/nar/gkad1005.
- 23. Riggs, Elizabeth R., et al. Technical Standards for the Interpretation and Reporting of Constitutional Copy-Number Variants: A Joint Consensus Recommendation of the American College of Medical Genetics and Genomics (ACMG) and the Clinical Genome Resource (ClinGen). Genetics in Medicine, vol. 22, no. 2, 2020, pp. 245–257. https://doi.org/10.1038/s41436-019-0686-8.
- 24. Geoffroy, Vincent, et al. AnnotSV: An Integrated Tool for Structural Variations Annotation. Bioinformatics, vol. 34, no. 20, 2018, pp. 3572–3574. https://doi.org/10.1093/bioinformatics/bty304.
- 25. Babadi, Mehrtash, et al. GATK-gCNV Enables the Discovery of Rare Copy Number Variants from Exome Sequencing Data. Nature Genetics, vol. 55, no. 9, 2023, pp. 1589–1597.
- 26. Gargano, Maria A., et al. The Human Phenotype Ontology in 2024: Phenotypes Around the World. Nucleic Acids

Damhanlase

Avenievala

Danjawala

.-.ucreome Informatics **Private** Limited

Research, vol. 52, no. D1, 2024, pp. D1333-D1346. https://doi.org/10.1093/nar/gkad1005.

- 27. Bruford, Elspeth A., et al. Guidelines for Human Gene Nomenclature. Nature Genetics, vol. 52, no. 8, 2020, pp. 754–758. https://doi.org/10.1038/s41588-020-0669-3.
- 28. Orphanet. https://www.orpha.net/.

Mamhanlage

Maniawala

Danjawsla





Name	
Sex/Age	
Date Received:	07-Aug-2024
Indication :	•

Appendix 1:SAMPLE DATA AND STATISTICS

Title	Data

Appendix 2: COVERAGE SUMMARY

Mean Depth	Percentag <mark>e ta</mark> rget base pairs covered			
50.78x	1x	5x	20x	
	98.01%	97.46%	94.77%	

Appendix 3: COVERAGE OF ANALYZED GENES (Percentage of coding region covered)

Gene	Region Covered	Gene	Region covered	Gene	Region covered

-----EndOf Rpe o rt·----

Reviewed by

Damhanlase

Avlamanala

Danjawala

.-.ucreome

.-.ucreome Informatics Private Limited