

Genetic Analysis Beyond Standard New Born Screening

Rapid Newborn Genetic Screening of
335 Genes by NGS Technology

"New Born Screening" is a Hybridization based library preparation techniques for high-throughput Sequencing

It covers all sequencing of all exonic regions for 335 genes associated with metabolic and genetic diseases. The test is indicated for newborns and children. Offers early screening for genetic and metabolic diseases that appear during the first stages of life, providing key information for disease management and early treatment.

Early detection, intervention & management could prove essential for the infant's overall health and quality of life.

Potential Benefits

- Screens for over 300 diseases
- Identify potential health risks before symptoms arise
- Early detection known to have a positive impact

Panel Performance

| Features | Performance |
|---------------------|-------------|
| Coverage uniformity | 95% |
| Precision | 98% |
| Reproducibility | 98% |
| Sensitivity | >90% |
| On Target Ratio | 86-93% |



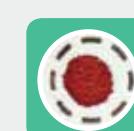
Metabolic Disorders

- Amino Acids Metabolic Disorders
- Organic Acid Metabolic Disorders
- Fatty Acid β Oxidation Metabolic Disorders
- Endocrine Disorders
- Carbohydrate Metabolic Disorders
- Metabolic Epilepsy Diseases
- Other Inborn Errors of Metabolism

Genetic Disorders

- Deafness
- Hemophilia B
- B-thalassaemia
- Noonan Syndrome
- Marfan Syndrome

Specimen Required



Dry Blood Spots
(size 3.2mm, 5 pieces)
by heel prick test



Peripheral Blood (1ml)

genomekundli

This test is designed for

The test is indicated for newborns and children who do not present symptoms of disease.

Neonates with abnormal results of routine biochemical screening, MS/MS screening or failure on routine hearing screenings.

Neonates with clinical manifestation of delayed jaundice, difficulty in feeding, vomiting, diarrhea, anemias.

Advantages

Expert Specially designed gene detection kit for newborn screening

Screen for diseases beyond standard Newborn testing

Accurate Multiple quality control, multi-center verification, Leading phenotypic-genotypic database

| Commercial Name | Cat No. |
|--|--|
| Genome Kundli NGS Panel (New Born Screening) | G2MGK29001-ill G2MGK29001-MG G2MGK29001-TF |

| S.No. | Disease Name | S.No. | Disease Name |
|-------|--|-------|--|
| 1 | 2,4 Dienoyl-CoA reductase deficiency | 102 | Deafness 10 |
| 2 | 2-methyl-3-hydroxybutyric aciduria | 103 | Deafness 6 |
| 3 | 2-methylbutyric aciduria | 104 | Deafness 8 |
| 4 | 2-methylbutyryl-CoA dehydrogenase deficiency | 105 | Developmental and epileptic encephalopathy 6 |
| 5 | 3-hydroxy-3-methylglutaric aciduria | 106 | Developmental delay due to ALDH6A1 deficiency |
| 6 | 3-methylcrotonyl-CoA carboxylase 1 deficiency | 107 | Dravet syndrome |
| 7 | 3-methylcrotonyl-CoA carboxylase 2 deficiency | 108 | Duchenne muscular dystrophy |
| 8 | 3-methylglutaconic aciduria 1 | 109 | Dystonia dopa-responsive due to sepiapterin reductase deficiency |
| 9 | 3-methylglutaconic aciduria 3 | 110 | Early infantile epileptic encephalopathy |
| 10 | 3-methylglutaconic aciduria 7 | 111 | Enteropathy |
| 11 | 3-methylglutaconic aciduria 9 | 112 | Epilepsy vitamin B6-dependent |
| 12 | 3-phosphoglycerate dehydrogenase deficiency | 113 | Erythropoietic protoporphiria |
| 13 | 6-pyruvoyl-tetrahydropterin synthase deficiency | 114 | Ethymalonic encephalopathy |
| 14 | Abetalipoproteinemia | 115 | Fabry disease |
| 15 | Abnormal metabolism thyroid hormone | 116 | Familial Mediterranean fever |
| 16 | Achalasia-addisonianism-alacrima syndrome | 117 | Familial glucocorticoid deficiency |
| 17 | Achondroplasia | 118 | Familial hemophagocytic lymphohistiocytosis |
| 18 | Acrodermatitis enteropathica | 119 | Familial hyperaldosteronism I |
| 19 | Acute hepatic porphyria | 120 | Familial infantile convulsions with paroxysmal choreoathetosis |
| 20 | Adrenoleukodystrophy | 121 | Favism |
| 21 | Agammaglobulinemia X-linked | 122 | Frasier syndrome |
| 22 | Alagille syndrome | 123 | Fructose 1,6-bisphosphatase deficiency |
| 23 | Alkaptonuria | 124 | GLUT1 deficiency syndrome 1 |
| 24 | Alpha-mannosidosis | 125 | GM1-gangliosidosis 1 |
| 25 | Alport syndrome | 126 | Galactosemia I |
| 26 | Argininemia | 127 | Galactosemia IV |
| 27 | Argininosuccinic aciduria | 128 | Galactosemia due to galactokinase deficiency |
| 28 | Aromatic L-Amino Acid Decarboxylase Deficiency | 129 | Galactosemia due to galactose epimerase deficiency |
| 29 | Aspartylglucosaminuria | 130 | Galactosemia due to mutarotase deficiency |
| 30 | Axata with isolated vitamin E deficiency | 131 | Gaucher disease |
| 31 | Autosomal dominant and recessive GTP cyclohydrolase I | 132 | Glutaric Acidemia II |
| 32 | Autosomal dominant hyperinsulinism due to SUR1 deficiency | 133 | Glutathione synthetase deficiency |
| 33 | Autosomal recessive 1A deafness | 134 | Glycine encephalopathy |
| 34 | Autosomal recessive 1B deafness | 135 | Glycogen storage 1a disease |
| 35 | Autosomal recessive DOPA-responsive dystonia | 136 | Glycogen storage disease 0 |
| 36 | Autosomal recessive Segawa syndrome | 137 | Glycogen storage disease IB and IC |
| 37 | Autosomal recessive deafness 18a | 138 | Glycogen storage disease II |
| 38 | Autosomal recessive deafness 28 | 139 | Glycogen storage disease III |
| 39 | Autosomal recessive deafness 31 | 140 | Glycogen storage disease Ia |
| 40 | Autosomal recessive deafness 79 | 141 | Glycogen storage disease VI |
| 41 | Bare lymphocyte syndrome II | 142 | Glycogen storage disease type |
| 42 | Barth syndrome | 143 | Growth delay due to insulin-like growth factor I deficiency |
| 43 | Benign familial infantile seizures | 144 | HMG-CoA synthase 2 deficiency |
| 44 | Benign familial neonatal epilepsy | 145 | Hearing loss (HL) |
| 45 | Beta-ketothiolase deficiency | 146 | Hemophilia A |
| 46 | Biotinidase deficiency | 147 | Hemophilia B |
| 47 | Carbamoyl-phosphate synthetase 1 deficiency | 148 | Hereditary amyloidosis transthyretin-related |
| 48 | Carnitine palmitoyl transferase 1a deficiency | 149 | Hereditary angiogenesis 1 and 2 |
| 49 | Carnitine palmitoyl transferase 2 deficiency | 150 | Hereditary fructose intolerance |
| 50 | Carnitine-acylcarnitine translocase deficiency | 151 | Hereditary hemorrhagic telangiectasia type 1 |
| 51 | Cerebral creatine deficiency 2 syndrome | 152 | Hereditary hemorrhagic telangiectasia type 2 |
| 52 | Cerebral creatine deficiency 3 syndrome | 153 | Hermanns-Pudlak syndrome |
| 53 | Cerebral creatine deficiency syndrome 1 | 154 | Heterotaxy |
| 54 | Cerebral folate transport deficiency | 155 | Holocarboxylase synthetase deficiency |
| 55 | Cerebrotendinous xanthomatosis | 156 | Homocystinuria due to methylene trahydrofolate reductase deficiency |
| 56 | Chronic granulomatous X-linked disease | 157 | Homocystinuria-megaloblastic anemia due to defect in cobalamin metabolism cb1G |
| 57 | Citrullinemia 1 | 158 | Homocystinuria-megaloblastic anemia due to defect in cobalamin metabolism cb1E |
| 58 | Citrullinemia 2 | 159 | Hunter disease |
| 59 | Classic galactosemia | 160 | Hurler-Scheie syndrome |
| 60 | Classic homocystinuria | 161 | Hyperammonemia due to N-acetylglutamate synthase deficiency |
| 61 | Classical congenital adrenal hyperplasia due to 21-hydroxylase deficiency | 162 | Hypercholesterolemia |
| 62 | Combined immunodeficiency due to DOCK8 deficiency | 163 | Hyperinsulinemic hypoglycemia 4 |
| 63 | Combined malonic and methylmalonic acidemia | 164 | Hyperinsulinemic hypoglycemia 6 |
| 64 | Combined pituitary hormone deficiencies | 165 | Hyperinsulinism-hyperammonemia syndrome |
| 65 | Combined pituitary hormone deficiency | 166 | Hypermethioninemia due to adenosine kinase deficiency |
| 66 | Combined pituitary hormone deficiency 2 | 167 | Hypermethioninemia due to glycine N-methyltransferase deficiency |
| 67 | Complementation group B | 168 | Hypermethioninemia with S-adenosylhomocysteine hydrolase deficiency |
| 68 | Complementation group C and E | 169 | Hyperornithinemia-hyperammonemia-homocitrullinuria syndrome |
| 69 | Complementation group D | 170 | Hyperprolinemia 1 |
| 70 | Congenital adrenal hyperplasia due to 11-beta-hydroxylase deficiency | 171 | Hyperprolinemia II |
| 71 | Congenital adrenal hyperplasia due to 17-alpha-hydroxylase deficiency | 172 | Hypervalinemia and hyperleucine-iso-leucinemia |
| 72 | Congenital adrenal hyperplasia due to 3-beta-hydroxysteroid dehydrogenase 2 deficiency | 173 | Hypocalciuric hypercalcemia I |
| 73 | Congenital amegakaryocytic thrombocytopoenia | 174 | Hypophosphatasia |
| 74 | Congenital bile acid synthesis defect 1 | 175 | Hypophosphatemic rickets with hypercalcemia |
| 75 | Congenital bile acid synthesis defect 2 | 176 | Immune dysregulation |
| 76 | Congenital bile acid synthesis defect 4 | 177 | Immunodeficiency 18 |
| 77 | Congenital bile acid synthesis defect 6 | 178 | Immunodeficiency 19 |
| 78 | Congenital cyclic neutropenia 1 | 179 | Immunodeficiency by defective expression of MHC class I |
| 79 | Congenital disorder of glycosylation 1b | 180 | Isobutyryl-CoA dehydrogenase deficiency |
| 80 | Congenital hyperinsulinism | 181 | Isovaleric acidemia |
| 81 | Congenital hypothyroidism due to thyroid dysgenesis or hypoplasia | 182 | Jervell and Lange-Nielsen syndrome |
| 82 | Congenital hypothyroidism nongoitrous 1 | 183 | Juvenile polyposis syndrome |
| 83 | Congenital hypothyroidism nongoitrous 4 | 184 | Krabbe disease |
| 84 | Congenital hypothyroidism nongoitrous 5 | 185 | L-2-hydroxyglutaric aciduria |
| 85 | Congenital hypothyroidism nongoitrous 6 | 186 | Leigh syndrome |
| 86 | Congenital hypothyroidism nongoitrous 7 | 187 | Lipoprotein lipase deficiency (LPL) |
| 87 | Congenital hypothyroidism nongoitrous 8 | 188 | Loeys-Dietz syndrome |
| 88 | Congenital hypothyroidism nongoitrous 9 | 189 | Long-chain 3-hydroxyacyl-CoA dehydrogenase (subunit A) deficiency |
| 89 | Congenital insensitivity to pain with anhidrosis | 190 | Long-chain 3-hydroxyacyl-CoA dehydrogenase (subunit B) deficiency |
| 90 | Congenital lipid adrenal hyperplasia | 191 | Lysinuric protein intolerance |
| 91 | Cori disease | 192 | Lysosomal acid lipase deficiency |
| 92 | Craniometaphyseal dysplasia | 193 | MHC class II deficiency |
| 93 | Crigler-Najjar syndrome 1 and 2 | 194 | Malonic aciduria |
| 94 | Crisponi syndrome | 195 | Malonyl-CoA decarboxylase deficiency |
| 95 | Cryopyrin-associated periodic syndrome | 196 | Maple syrup urine la disease |
| 96 | Cystathioninuria | 197 | Maple syrup urine lb disease |
| 97 | Cystic fibrosis | 198 | Maple syrup urine disease type III |
| 98 | Cystinosis | 199 | Marfan syndrome |
| 99 | Cystinuria | 200 | Maroteaux-Lamy disease |
| 100 | Cytochrome P450 oxidoreductase deficiency | 201 | Medium chain Acyl-CoA dehydrogenase deficiency |
| 101 | Danon disease | 202 | Menkes disease |

| S.No. | Disease Name | S.No. | Disease Name |
|-------|---|-------|--|
| 203 | Metachromatic leukodystrophy | 272 | Pyridoxamine 5-prime-phosphate oxidase deficiency |
| 204 | Methionine adenosyltransferase deficiency | 273 | Pyridoxine-dependent epilepsy |
| 205 | Methylmalonic Acidemia and Homocysteinemia cblX | 274 | Pyruvate carboxylase deficiency |
| 206 | Methylmalonic acidemia and homocysteinemia cblX | 275 | Pyruvate kinase deficiency |
| 207 | Methylmalonic acidemia cblA | 276 | Q-dihydropteridine reductase deficiency |
| 208 | Methylmalonic acidemia cblB | 277 | RPE65-associated retinal dystrophy |
| 209 | Methylmalonic acidemia due to methylmalonyl-CoA epimerase deficiency | 278 | Retinitis pigmentosa 39 |
| 210 | Methylmalonic acidemia due to methylmalonyl-CoA mutase deficiency | 279 | Retinoblastoma |
| 211 | Methylmalonic aciduria | 280 | Sanfilippo A |
| 212 | Methylmalonic aciduria and homocystinuria cblJ | 281 | Sanfilippo B |
| 213 | Methylmalonic aciduria and homocystinuria cblC | 282 | Sanfilippo C |
| 214 | Methylmalonic aciduria and homocystinuria cblD | 283 | Sanfilippo D |
| 215 | Methylmalonic aciduria and homocystinuria cblF | 284 | Scheie syndrome |
| 216 | Methylmalonic aciduria due to transcobalamin receptor defect | 285 | Sensorineural hearing loss |
| 217 | Mevalonic aciduria | 286 | Severe Combined Immunodeficiency |
| 218 | Mild non-BH4-deficient hyperphenylalaninemia | 287 | Severe Combined Immunodeficiency JAK3 |
| 219 | Mitochondrial DNA depletion syndrome 5 (encephalomyopathic with or without methylmalonic aciduria) | 288 | Severe combined immunodeficiency Athabaskan |
| 220 | Morquio A syndrome | 289 | Severe combined immunodeficiency B RAG-deficient |
| 221 | Morquio B syndrome | 290 | Severe combined immunodeficiency RAG-deficient |
| 222 | Mucolipidosis II | 291 | Severe combined immunodeficiency X-linked |
| 223 | Mucopolysaccharidosis 7 | 292 | Severe combined immunodeficiency due to IL-7Ralpha deficiency |
| 224 | Mucopolysaccharidosis I | 293 | Severe combined immunodeficiency due to adenosine deaminase deficiency |
| 225 | Mucopolysaccharidosis II | 294 | Severe congenital neutropenia 3 |
| 226 | Mucopolysaccharidosis IIIA | 295 | Shah-Waardenburg syndrome |
| 227 | Mucopolysaccharidosis IIIC | 296 | Short chain Acyl-CoA dehydrogenase deficiency |
| 228 | Mucopolysaccharidosis IID | 297 | Sickle cell anemia |
| 229 | Mucopolysaccharidosis IVA | 298 | Sitosterolemia |
| 230 | Mucopolysaccharidosis VI | 299 | Sly syndrome |
| 231 | Multiple acyl-CoA dehydrogenase deficiency | 300 | Spherocytosis |
| 232 | Multiple endocrine neoplasia I | 301 | Spinal muscular atrophy I |
| 233 | Neonatal diabetes mellitus | 302 | Spinal muscular atrophy II |
| 234 | Neonatal hyperparathyroidism | 303 | Spinal muscular atrophy III |
| 235 | Neonatal lactic acidosis with methylmalonic aciduria | 304 | Spinal muscular atrophy IV |
| 236 | Nephrogenic diabetes insipidus 1 | 305 | Systemic primary carnitine deficiency |
| 237 | Nephrogenic diabetes insipidus 2 | 306 | Tay-Sachs disease |
| 238 | Neu-Laxova syndrome-2 | 307 | Thrombotic thrombocytopenic purpura |
| 239 | Neurofibromatosis type 1 | 308 | Thyroid hormonogenesis 1 defect |
| 240 | Neurofibromatosis type 2 | 309 | Thyroid hormonogenesis 2A defect |
| 241 | Neuronal ceroid lipofuscinosis 2 | 310 | Thyroid hormonogenesis 3 defect |
| 242 | Nevoid basal cell carcinoma syndrome | 311 | Thyroid hormonogenesis 4 defect |
| 243 | Niemann-Pick A and B disease | 312 | Thyroid hormonogenesis 5 defect |
| 244 | Niemann-Pick C disease | 313 | Thyroid hormonogenesis 6 defect |
| 245 | Nonketotic hyperglycinemia | 314 | Transcobalamin II deficiency |
| 246 | Nonsyndromic hearing loss | 315 | Transient infantile liver failure |
| 247 | Noonan syndrome | 316 | Triple A syndrome |
| 248 | Ocular albinism type I | 317 | Tuberous sclerosis complex 1 |
| 249 | Oculocutaneous albinism type IV | 318 | Tuberous sclerosis complex 2 |
| 250 | Optic atrophy 1 | 319 | Tyrosinemia 1 |
| 251 | Ornithine aminotransferase deficiency | 320 | Tyrosinemia 2 |
| 252 | Ornithine transcarbamylase deficiency | 321 | Tyrosinemia 3 |
| 253 | Osteogenesis imperfecta | 322 | Usher syndrome 1b |
| 254 | Osteopetrosis | 323 | Usher syndrome 1c |
| 255 | PSPH - phosphoserine phosphatase | 324 | Usher syndrome 1d |
| 256 | Paroxysmal exertion-induced dyskinesia | 325 | Usher syndrome 1g |
| 257 | Paroxysmal nocturnal hemoglobinuria | 326 | Usher syndrome 2a |
| 258 | Pendred syndrome | 327 | Usher syndrome 2d |
| 259 | Peutz-Jeghers syndrome | 328 | Very long chain Acyl-CoA dehydrogenase deficiency |
| 260 | Phenylketonuria | 329 | Vitamin D hydroxylation-deficient rickets I |
| 261 | Pituitary hormone deficiency 1 | 330 | Vitamin D-dependent rickets 2 |
| 262 | Polycystic kidney and hepatic disease | 331 | Von Hippel-Lindau syndrome |
| 263 | Polycystic kidney disease | 332 | Waardenburg syndrome |
| 264 | Polyendocrinopathy | 333 | Wilson disease |
| 265 | Pompe disease | 334 | Wolman disease |
| 266 | Primary hyperoxaluria 1 | 335 | X-linked adrenal hypoplasia congenita |
| 267 | Primary hyperoxaluria 2 | 336 | X-linked central congenital hypothyroidism with testicular enlargement |
| 268 | Primary hyperoxaluria 3 | 337 | X-linked hyper IgM syndrome |
| 269 | Propionic acidemia | 338 | X-linked hypophosphatemic rickets |
| 270 | Pseudohypoaldosteronism 1 | 339 | Xeroderma pigmentosum |
| 271 | Pterin-4-alpha-carbinolamine dehydratase deficiency | 340 | β -thalassaemia |



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