Craniosynostosis

Precision Panel

Overview

Craniosynostosis is defined as the premature fusion of one or more cranial sutures, often resulting in abnormal head shape. It is a developmental craniofacial anomaly resulting from a primary defect of ossification (primary craniosynostosis) or, more commonly, from a failure of brain growth (secondary craniosynostosis). As well, craniosynostosis can be simple when only one suture fuses prematurely or complex/compound when there is a premature fusion of multiple sutures. Complex craniosynostosis are usually associated with other body deformities. The main morbidity risk is the elevated intracranial pressure and subsequent brain damage. When left untreated, craniosynostosis can cause serious complications such as developmental delay, facial abnormality, sensory, respiratory and neurological dysfunction, eye anomalies and psychosocial disturbances. In approximately 85% of the cases, this disease is isolated and nonsyndromic. Syndromic craniosynostosis usually present with multiorgan complications.

The Igenomix Craniosynostosis Precision Panel can be used to make a directed and accurate diagnosis ultimately leading to a better management and prognosis of the disease. It provides a comprehensive analysis of the genes involved in this disease using next-generation sequencing (NGS) to fully understand the spectrum of relevant genes involved.

Indications

The Igenomix Craniosynostosis Precision Panel is indicated for those patients with a clinical diagnosis or suspicion with or without the following manifestations:

- Microcephaly
- Scaphocephaly (elongated head)
- Anterior plagiocephaly
- Brachycephaly
- Torticollis
- Frontal bossing

Clinical Utility

The clinical utility of this panel is:

- The genetic and molecular confirmation for an accurate clinical diagnosis of a symptomatic patient.
- Early initiation of treatment in the form surgical procedures to relieve fused sutures, midface advancement, limited phase of orthodontic treatment and combined

orthodontics/orthognathic surgery treatment. Monitoring and prevent complications of elevated intracranial pressure.

- Risk assessment and genetic counselling of asymptomatic family members according to the mode of inheritance.
- Improvement of delineation of genotype-phenotype correlation.

Genes & Diseases

GENE	OMIM DISEASES	INHERITANCE*	% GENE COVERAGE (20X)	HGMD**
ADAMTS3	Hennekam Syndrome	AR	99.97	4 of 4
AHDC1	Xia-Gibbs Syndrome, AHDC1-Related Intellectual Disability-Obstructive Sleep Apnea-Mild Dysmorphism Syndrome	AD	99.87	41 of 43
AKT1	Proteus Syndrome, Meningioma	AD	100	6 of 6
ALPL	Hypophosphatasia	AD,AR	100	320 of 321
ALX3	Frontonasal Dysplasia	AR	89.31	8 of 8
ALX4	Craniosynostosis, Frontonasal Dysplasia, Enlarged Parietal Foramina, Isolated Scaphocephaly, Potocki-Shaffer Syndrome	AD,AR	99.94	25 of 25
APC2	Complex Cortical Dysplasia, Sotos Syndrome	AR	94.97	11 of 11
ARVCF	22q11.2 Deletion Syndrome	-	99.95	2 of 2
ASXL1	Bohring-Opitz Syndrome, Bohring-Opitz Syndrome	AD	99.96	41 of 41
ATR	Cutaneous Telangiectasia And Cancer Syndrome, Seckel Syndrome	AD,AR	99.98	39 of 40
ATRIP	Seckel Syndrome	-	99.89	2 of 2
B3GAT3	Multiple Joint Dislocations, Short Stature, Craniofacial Dysmorphism, With Or Without Congenital Heart Defects	AR	99.86	15 of 15
B3GLCT	Peters Plus Syndrome	AR	99.96	-
B4GALT7	Ehlers-Danlos Syndrome, Spondylodysplastic Type	AR	99.92	11 of 11
BMP4	Syndromic Microphthalmia, Cleft Lip/Palate, Microphthalmia With Brain And Digit Anomalies	AD,MU,P	100	38 of 42
BPNT2	Chondrodysplasia With Joint Dislocations	AR	97.04	4 of 4
CCBE1	Hennekam Lymphangiectasia-Lymphedema Syndrome	AR	100	16 of 16
CCNQ	Toe Syndactyly, Telecanthus, And Anogenital And Renal Malformations	X,XD,G	99.59	-
CD96	C Syndrome	AD	100	4 of 4
CDC45	Meier-Gorlin Syndrome, Ear-Patella-Short Stature Syndrome	AR	99.99	19 of 19
CDC6	Meier-Gorlin Syndrome, Ear-Patella-Short Stature Syndrome	AR	100	2 of 2
CDH11	Elsahy-Waters Syndrome, Branchioskeletogenital Syndrome	AR	99.95	10 of 10
CDT1	Meier-Gorlin Syndrome, Ear-Patella-Short Stature Syndrome	AR	97.43	12 of 12
CENPE	Primary Microcephaly, Seckel Syndrome	AR	95.69	5 of 5
CENPJ	Autosomal Recessive Primary Microcephaly, Seckel Syndrome	AR	99.97	13 of 13
CEP120	Joubert Syndrome, Short-Rib Thoracic Dysplasia With Or Without Polydactyly, Jeune Syndrome	AR	99.8	9 of 9
CEP152	Autosomal Recessive Primary Microcephaly, Seckel Syndrome	AR	97.73	21 of 24
CHST14	Musculocontractural Ehlers-Danlos Syndrome	AR	97.7	21 of 22
CHST3	Multiple Joint Dislocations, Short Stature, Craniofacial Dysmorphism, With Or Without Congenital Heart Defects, Spondyloepiphyseal Dysplasia With Congenital Joint Dislocations, Chst3-Related Skeletal Dysplasia	AR	99.97	38 of 38
CLCN7	Osteopetrosis, Albers-Schonberg Osteopetrosis	AD,AR	99.85	109 of 111
COLEC10	3mc Syndrome	AR	99.95	3 of 3
COLEC11	Carnevale Syndrome, 3mc Syndrome	AR	100	11 of 11
COMT	22q11.2 Deletion Syndrome	AD	99.98	5 of 5
CTCF	Intellectual Disability-Feeding Difficulties-Developmental Delay-Microcephaly Syndrome	AD	96.6	39 of 41
CWC27	Retinitis Pigmentosa With Or Without Skeletal Anomalies	AR	99.77	8 of 8
CYP26B1	Craniosynostosis With Radiohumeral Fusions And Other Skeletal And Craniofacial Anomalies	AR	100	12 of 12
DMP1	Hypophosphatemic Rickets	AR	99.89	11 of 11
DONSON	Microcephaly-Micromelia Syndrome, Microcephaly, Short Stature, And Limb Abnormalities	AR	98.14	26 of 27
DPF2	Coffin-Siris Syndrome	AD	99.99	10 of 10

DPH1	Developmental Delay With Short Stature, Dysmorphic Features, And Sparse Hair, Craniofacial Dysplasia-Short Stature-Ectodermal Anomalies-Intellectual Disability Syndrome	AR	100	8 of 8
DSE	Musculocontractural Ehlers-Danlos Syndrome	AR	99.94	3 of 3
EDNRB	Abcd Syndrome, Waardenburg-Shah Syndrome	AD,AR	99.55	70 of 72
EFNB1	Craniofrontonasal Syndrome	X,XD,G	100	-
ENPP1	Cole Disease, Hypophosphatemic Rickets	AD,AR,MU,P	96.59	73 of 75
ERCC2	Cerebrooculofacioskeletal Syndrome, Trichothiodystrophy, Xeroderma Pigmentosum-Cockayne Syndrome Complex	AR	100	102 of 102
ERCC3	Trichothiodystrophy, Xeroderma Pigmentosum-Cockayne Syndrome Complex	AR	99.98	24 of 24
ERF	Chitayat Syndrome, Lambdoid Synostosis, Crouzon Disease, Isolated Cloverleaf Skull Syndrome, Isolated Scaphocephaly	AD	99.73	31 of 31
ESCO2	Roberts Syndrome, Sc Phocomelia Syndrome	AR	99.69	32 of 32
ETS2	Down Syndrome		99.99	1 of 2
EXTL3	Immunoskeletal Dysplasia With Neurodevelopmental Abnormalities Skeletal Dysplasia-T-cell Immunodeficiency-Developmental Delay Syndrome	AR	99.99	10 of 10
FAT4	Hennekam Lymphangiectasia-lymphedema Syndrome, Van Maldergem Syndrome, Cerebrofacioarticular Syndrome	AR	99.8	41 of 41
FBN1	Acromicric Dysplasia, Isolated Ectopia Lentis, Geleophysic Dysplasia, Marfan Lipodystrophy Syndrome, Mass Syndrome, Weill-Marchesani Syndrome, Acromicric Dysplasia, Shprintzen-Goldberg Syndrome	AD	100	2836 of 2845
FGF9	Multiple Synostoses Syndrome	AD	100	2 of 2
FGFR1	Encephalocraniocutaneous Lipomatosis, Hartsfield Syndrome, Jackson-Weiss Syndrome, Osteoglophonic Dysplasia, Pfeiffer Syndrome, Nonsyndromic Trigonocephaly, Encephalocraniocutaneous Lipomatosis, Lobar Holoprosencephaly, Microform Holoprosencephaly, Septo-Optic Dysplasia Spectrum	AD	100	279 of 280
FGFR2	Antley-Bixler Syndrome Without Genital Anomalies Or Disordered Steroidogenesis, Apert Syndrome, Bent Bone Dysplasia Syndrome, Crouzon Syndrome, Cutis Gyrata Syndrome Of Beare And Stevenson, Familial Scaphocephaly Syndrome,, Lacrimoauriculodentodigital Syndrome, Pfeiffer Syndrome, Saethre-Chotzen Syndrome, Familial Scaphocephaly Syndrome, Fgfr2-Related Bent Bone Dysplasia	AD	98	140 of 143
FGFR3	Achondroplasia With Developmental Delay And Acanthosis Nigricans, Camptodactyly, Tall Stature, And Hearing Loss Syndrome, Hypochondroplasia, Lacrimoauriculodentodigital Syndrome, Muenke Syndrome, Thanatophoric Dysplasia, Isolated Brachycephaly, Isolated Plagiocephaly, Saethre-Chotzen Syndrome	AD,AR	99.89	77 of 78
FLNA	Fg Syndrome, Frontometaphyseal Dysplasia, Melnick-Needles Syndrome, Otopalatodigital Syndrome, Terminal Osseous Dysplasia, Frontometaphyseal Dysplasia, Otopalatodigital Syndrome, X-linked Ehlers-Danlos Syndrome	X,XR,XD,G	100	-
FLNB	Atelosteogenesis, Boomerang Dysplasia, Larsen Syndrome, Spondylocarpotarsal Synostosis Syndrome	AD,AR	100	124 of 124
FREM1	Manitoba Oculotrichoanal Syndrome, Trigonocephaly, Bnar Syndrome, Isolated Trigonocephaly	AD,AR	97.32	27 of 30
GDF5	Acromesomelic Dysplasia, Brachydactyly, Chondrodysplasia, Fibular Hypoplasia And Complex Brachydactyly, Multiple Synostoses Syndrome, Symphalangism, Angel-Shaped Phalango-Epiphyseal Dysplasia, Brachydactyly Syndrome, Multiple Synostoses Syndrome, Proximal Symphalangism	AD,AR	99.48	48 of 51
GLI3	Greig Cephalopolysyndactyly Syndrome, Pallister-Hall Syndrome, Polydactyly, Acrocallosal Syndrome,Tibial Hemimelia	AD,AR	100	231 of 231
GLIS3	Diabetes Mellitus, Neonatal, With Congenital Hypothyroidism	AR	99.83	21 of 21
GMNN	Meier-Gorlin Syndrome, Ear-Patella-Short Stature Syndrome	AD	99.72	3 of 3
GNPTAB	Mucolipidosis II and III	AR	100	279 of 280
GP1BB	22q11.2 Deletion Syndrome	AR	74.08	26 of 50
GPC6	Autosomal Recessive Omodysplasia	AR	99.92	3 of 3
GTF2E2	Nonphotosensitive Trichothiodystrophy	AR	99.98	2 of 2
GTF2H5	Photosensitive Trichothiodystrophy	AR	100	8 of 8
HIRA	22q11.2 Deletion Syndrome	-	99.99	5 of 5
HNRNPK	Au-Kline Syndrome; Auks ,	AD	99.88	16 of 17
HUWE1	X-linked Intellectual Disability	X,G	99.41	-
IFT122	Cranioectodermal Dysplasia	AR	99.83	22 of 22

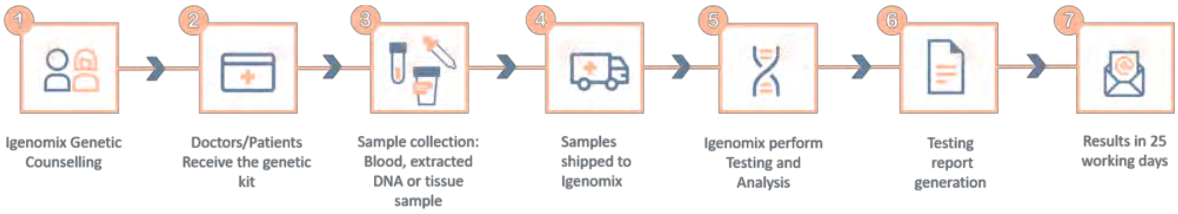
IFT140	Short-Rib Thoracic Dysplasia With Or Without Polydactyly, Jeune Syndrome	AR	99.97	81 of 81
IFT43	Cranioectodermal Dysplasia, Shoty-Rib Thoracic Dysplasia With Polydactyly	AR	100	6 of 6
IFT52	Short-Rib Thoracic Dysplasia With Or Without Polydactyly, Cranioectodermal Dysplasia	AR	99.8	8 of 8
IHH	Acrocapitofemoral Dysplasia, Brachydactyly, Acrocapitofemoral Dysplasia	AD,AR	99.39	28 of 29
IL11RA	Craniosynostosis And Dental Anomalies	AR	100	22 of 22
IL6ST	Hyper-IgE Recurrent Infection Syndrome	AR	99.34	2 of 2
IRX5	Hamamy Syndrome	AR	97.1	5 of 5
JMJD1C	22q11.2 Deletion Syndrome		99.09	27 of 27
KAT6A	Arboleda-Tham Syndrome, Autosomal Dominant Intellectual Disability-Craniofacial Anomalies-Cardiac Defects Syndrome	AD	99.89	66 of 68
KPTN	Macrocephaly-Developmental Delay Syndrome	AR	100	5 of 5
KRAS	Aplasia Cutis Congenita With Epibulbar Dermoids, Cardiofaciocutaneous Syndrome, Noonan Syndrome, Schimmelpenning-Feuerstein-Mims Syndrome, Encephalocraniocutaneous Lipomatosis, Toriello-Lacassie-Droste Syndrome	AD	100	38 of 38
LEMD3	Buschke-Ollendorff Syndrome, 12q14 Microdeletion Syndrome, Isolated Osteopoikilosis, Melorheostosis With Osteopoikilosis	AD	99.06	30 of 33
LIG4	Lig4 Syndrome, Dubowitz Syndrome, Omenn Syndrome	AR	99.48	46 of 46
LRP5	Endosteal Hyperostosis, Osteopetrosis, Van Buchem Disease, Endosteal Hyperostosis, Hyperostosis Corticalis Generalisata, Osteosclerosis-Developmental Delay-Craniosynostosis Syndrome	AD,AR	98.12	265 of 269
MAF	Ayme-gripp Syndrome, Cataract-Microcornea Syndrome	AD	75.14	23 of 23
MAN2B1	Alpha-Mannosidosis	AR	100	149 of 149
MAP3K7	Cardiospondylocarpofacial Syndrome, Frontometaphyseal Dysplasia	AD	99.96	13 of 13
MASP1	3mc Syndrome	AR	100	29 of 30
MED12	Lujan-Fryns Syndrome, Ohdo Syndrome, Opitz-Kaveggia Syndrome, Fg Syndrome, X-linked Intellectual Disability With Marfanoid Habitus	X,XR,G	100	-
MEGF8	Carpenter Syndrome	AR	98.97	22 of 22
MIR140	Spondyloepiphyseal Dysplasia	AD	-	-
MPLKIP	Nonphotosensitive Trichothiodystrophy	AR	100	13 of 13
MSX2	Craniosynostosis, Parietal Foramina With Cleidocranial Dysplasia, Enlarged Parietal Foramina	AD	99.98	15 of 15
MYH3	Arthrogryposis, Contractures, Pterygia, And Spondylocarpostarsal Fusion Syndrome, Autosomal Recessive Multiple Pterygium Syndrome, Digitotalar Dysmorphism, Freeman-Sheldon Syndrome, Sheldon-Hall Syndrome	AD,AR	100	46 of 47
NFIX	Marshall-Smith Syndrome, Sotos Syndrome, 19p13.3 Microduplication Syndrome, Malan Overgrowth Syndrome, Marshall-Smith Syndrome	AD	94.42	75 of 81
NOG	Brachydactyly, Multiple Synostoses Syndrome, Stapes Ankylosis With Broad Thumb And Toes, Symphalangism, Tarsal-Carpal Coalition Syndrome, Synostosis Of Talus And Calcaneus With Short Stature	AD	99.89	61 of 62
NSD1	Sotos Syndrome, 5q35 Microduplication Syndrome, Weaver Syndrome	AD	99.8	451 of 459
NSUN2	Autosomal Recessive Non-Syndromic Intellectual Disability, Dubowitz Syndrome	AR	99.99	8 of 8
ORC1	Ear, Patella, Short Stature Syndrome	AR	100	12 of 12
ORC4	Meier-Gorlin Syndrome, Ear-Patella-Short Stature Syndrome	AR	100	4 of 4
ORC6	Meier-Gorlin Syndrome, Ear-Patella-Short Stature Syndrome	AR	100	6 of 6
P4HB	Cole-Carpenter Syndrome	AD	94.97	13 of 13
PAX3	Craniofacial-Deafness-Hand Syndrome, Waardenburg Syndrome	AD,AR	99.98	157 of 157
PCNT	Microcephalic Osteodysplastic Primordial Dwarfism, Seckel Syndrome	AR	99.92	103 of 105
PHEX	X-linked Hypophosphatemia	X,XD,G	99.42	-
PIGT	Multiple Congenital Anomalies-Hypotonia-Seizures Syndrome, Paroxysmal Nocturnal Hemoglobinuria, Intellectual Disability-Seizures-Hypophosphatasia-Ophthalmic-Skeletal Anomalies Syndrome	AD,AR	100	15 of 15
PLK4	Microcephaly And Chorioretinopathy, Seckel Syndrome	AR	99.74	10 of 10
POLA1	Van Esch-O'driscoll Syndrome, X-linked Intellectual Disability	X,XR,G	99.26	-
POR	Antley-Bixler Syndrome With Genital Anomalies And Disordered Steroidogenesis	AD,AR	99.98	67 of 68
PPP1CB	Noonan Syndrome-Like Disorder With Loose Anagen Hair	AD	99.87	12 of 12
PPP3CA	Arthrogryposis, Cleft Palate, Craniosynostosis, And Impaired Intellectual Development, Undetermined Early-Onset Epileptic Encephalopathy	AD	99.98	16 of 16

PSAT1	Neu-Laxova Syndrome, Phosphoserine Aminotransferase Deficiency	AR	99.95	9 of 9
PTEN	Macrocephaly/Autism Syndrome, Bannayan-Riley-Ruvalcaba Syndrome, Lhermitte-Duclos Disease, Segmental Outgrowth-Lipomatosis-Arteriovenous Malformation-Epidermal Nevus Syndrome	AD	99.97	609 of 629
RAB23	Carpenter Syndrome	AR	100	15 of 15
RAC3	Neurodevelopmental Disorder With Structural Brain Anomalies And Dysmorphic Facies	AD	94.13	5 of 5
RBBP8	Jawad Syndrome, Seckel Syndrome	AR	96.02	6 of 6
RECQL4	Baller-Gerold Syndrome, Rapadilino Syndrome, Rothmund-Thomson Syndrome	AR	96.72	134 of 135
RNF113A	Nonphotosensitive Trichothiodystrophy	X,XD,G	99.7	-
RREB1	22q11.2 Deletion Syndrome		99.92	8 of 8
RSPRY1	Spondyloepimetaphyseal Dysplasia	AR	99.98	4 of 4
RTTN	Microcephaly, Short Stature, And Polymicrogyria With Seizures, Microcephalic Primordial Dwarfism Due To Rttn Deficiency	AR	99.94	28 of 29
RUNX2	Cleidocranial Dysplasia, Metaphyseal Dysplasia With Maxillary Hypoplasia And Brachydactyly, Cleidocranial Dysplasia	AD	73.67	189 of 190
SCARF2	Van Den Ende-Gupta Syndrome	AR	93.06	13 of 13
SEC24C	22q11.2 Deletion Syndrome		99.98	-
SEC24D	Cole-Carpenter Syndrome	AR	99.97	14 of 14
SETD2	Luscan-Lumish Syndrome, Sotos Syndrome	AD	99.83	19 of 19
SKI	Shprintzen-Goldberg Craniosynostosis Syndrome, 1p36 Deletion Syndrome	AD	99.66	39 of 39
SLC12A6	Corpus Callosum Agenesis-Neuronopathy Syndrome	AR	100	21 of 21
SLC25A24	Fontaine Progeroid Syndrome, Gorlin-Chaudhry-Moss Syndrome	AD	99.59	2 of 2
SLC2A10	Arterial Tortuosity Syndrome	AR	100	35 of 35
SLC35A2	Congenital Disorder Of Glycosylation	X,XD,G	99.97	-
SLC39A8	Congenital Disorder Of Glycosylation	AR	99.89	7 of 7
SMAD3	Loeys-Dietz Syndrome, Aneurysm-Osteoarthritis Syndrome	AD	100	128 of 128
SMAD6	Craniosynostosis	AD	80.88	64 of 74
SMO	Craniofacial Malformations With Polysyndactyly And Abnormal Skin And Gut Development, Curry-Jones Syndrome	AR	94.03	10 of 10
SNX10	Autosomal Recessive Malignant Osteopetrosis	AR	100	14 of 14
SON	Zttk Syndrome, Brain Malformations-Musculoskeletal Abnormalities-Facial Dysmorphism-Intellectual Disability Syndrome	AD	99.27	30 of 32
SOX10	Peripheral Demyelinating Neuropathy, Central Dysmyelination, Waardenburg Syndrome	AD	99.74	139 of 147
SPECC1L	Facial Clefting, Hypertelorism, Opitz Gbbb Syndrome	AD	99.66	14 of 14
STAT3	Hyper-IgE Recurrent Infection Syndrome, Permanent Neonatal Diabetes Mellitus	AD	100	171 of 171
TANC2	Intellectual Developmental Disorder With Autistic Features And Language Delay, With Or Without Seizures, Non-Specific Syndromic Intellectual Disability	AD	97.81	21 of 21
TARS1	Nonphotosensitive Trichothiodystrophy	AR	99.94	-
TBC1D24	Doors Syndrome, Rolandic Epilepsy With Paroxysmal Exercise-Induced Dystonia Andwriter's Cramp, Myoclonic Epilepsy	AD,AR	100	80 of 80
TBX1	DiGeorge Syndrome, Velocardiofacial Syndrome	AD,AR	88.7	35 of 42
TCF12	Craniosynostosis, Isolated Brachycephaly, Isolated Plagiocephaly	AD	99.98	73 of 76
TCIRG1	Osteopetrosis, Dysosteosclerosis	AR	100	140 of 146
TCOF1	Treacher Collins-Franceschetti Syndrome	AD	100	326 of 327
TGFB2	Loeys-Dietz Syndrome	AD	99.9	41 of 44
TGFB3	Loeys-Dietz Syndrome	AD	100	34 of 35
TGFBR1	Loeys-Dietz Syndrome	AD	94	96 of 100
TGFBR2	Loeys-Dietz Syndrome	AD	99.9	165 of 166
TLK2	Autosomal Dominant Mental Retardation	AD	96.98	39 of 39
TMCO1	Cerebrofaciothoracic Dysplasia	AR	88	5 of 5
TNFSF11	Autosomal Recessive Malignant Osteopetrosis	AR	99.84	4 of 4
TRAIP	Seckel Syndrome	AR	100	2 of 2
TWIST1	Craniosynostosis, Robinow-Sorauf Syndrome, Saethre-Chotzen Syndrome, Sweeney-Cox Syndrome, Isolated Brachycephaly, Isolated Plagiocephaly, Isolated Scaphocephaly	AD	74.06	133 of 161
TWIST2	Ablepharon-Macrostomia Syndrome, Barber-Say Syndrome	AD,AR	99.82	9 of 9
UFD1	22q11.2 Deletion Syndrome	-	99.98	-
WDR19	Cranioectodermal Dysplasia, Senior-Loken Syndrome, Jeune Syndrome	AR	99.96	47 of 49

WDR35	Cranioectodermal Dysplasia, Short Rib-Polydactyly Syndrome	AR	100	31 of 33
YY1	Gabriele-de Vries Syndrome	AD	99.89	13 of 13
ZEB2	Mowat-Wilson Syndrome	AD	98.95	253 of 254
ZIC1	Craniosynostosis, Structural Brain Anomalies With Impaired Intellectual Development And Craniosynostosis, Isolated Brachycephaly, Isolated Oxycephaly, Isolated Plagiocephaly	AD	100	7 of 7

*Inheritance: AD: Autosomal Dominant; AR: Autosomal Recessive; X: X linked; XLR: X linked Recessive; Mi: Mitochondrial; Mu: Multifactorial.
**Number of clinically relevant mutations according to HGMD

Methodology



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Call +34 963 905 310 or send an email to supportspain@igenomix.com for any of the following objectives:

- Get more information about the test.
- Request your kit.
- Request a pick up of the kit after collecting the sample.

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