

CPT Codes for PCR and Sequencing

CPT Codes	Description
83891	Isolation or extraction of highly purified nucleic acid
83894	Separation by gel electrophoresis (eg, agarose, polyacrylamide)
83898	Amplification of patient nuclei acid (eg, PCR, LCR, single primer pair, each primer pair)
83904	Mutation identification by sequencing, single segment, each segment
80502	Comprehensive, for a complex diagnostic problem, with review of patient's history and medical records

Sequencing CPT Codes

Example – β sequence	Description	CPT Codes
1. PCR – amplification	2 Primers – 5' Primer 3' Primer	2 * 83898
2. Gel Electrophoresis (PAGE)	5' PCR product – 1 lane 3' PCR product – 1 lane	2 * 83894
3. Purification (QiaQuick Column)	5' PCR product – 1 column 3' PCR product – 1 column	2 * 83891
4. PCR – Sequencing reaction	4 Primers: 5A, 5B, 3A, 3B	4 * 83898
5. Purification (Ethanol Precipitation)	PCR products individually purified: 5A, 5B, 3A, 3B	4 * 83891
6. Sequence (Segment mutation identification)	ABI sequencer – 4 capillaries for 4 segments	4 * 83904
Beta Sequence Alpha Sequence Delta Sequence		2 * 83894 6 * 83891 6 * 83898 4 * 83904
A&G gamma promoter G-gamma gene A-gamma gene		2 * 83894 4 * 83891 4 * 83898 2 * 83904

ARMS and GAP PCR CPT Codes		
Example - Alpha deletion 3.7, 4.2, a2, lis	Description	CPT Codes
1. PCR – amplification	4 Primers – 3.7 Primer 4.2 Primer A2 Primer Lis Primer	4 * 83898
2. Gel Electrophoresis (PAGE or Agarose)	All PCR products – 1 lane	1 * 83894
2 Primer Pairs PCR: ARMS multiplex for Hb S ARMS multiplex for Hb C ARMS for Hb D-Los Angeles ARMS multiplex for Hb E ARMS for 25 nt α -thalassemia deletion ARMS for IVS II-654 β -thalassemia mutation ARMS for IVS II-745 β -thalassemia mutation Gap-PCR for Filipino β -thalassemia large deletion Gap-PCR for Chinese $\Delta\gamma\delta\beta$ -thalassemia deletion Gap-PCR for Sicilian $\delta\beta$ -thalassemia deletion Gap-PCR for HPFH 1(or 2) (Ghananian type) deletion		2 * 83898 1 * 83894
3 Primer Pairs PCR:		3 * 83898 1 * 83894
4 Primer Pairs PCR: ARMS multiplex for 4 East Indian β -thalassemia mutations Gap-PCR 3.7, 4.2, A2, Lis		4 * 83898 1 * 83894
5 Primer Pairs PCR: Gap-PCR 3.7, 4.2, A2, Lis (SEA) or THAI or FIL ARMS multiplex for 4 Chinese β -thalassemia mutations.		5 * 83898 1 * 83894
6 Primer Pairs PCR: Gap-PCR 3.7, 4.2, A2, Lis (-- ^{MED}) and -(α) ^{20.5}		6 * 83898 1 * 83894
7 Primer Pairs PCR: Gap-PCR 3.7, 4.2, A2, Lis, SEA, THAI, FIL		7 * 83898 1 * 83894