

hemoglobin_subunit_delta	.....MVLTPPEEKAVNALGKVKV..VDAVGGEGALGRLLVVYPWTQRF	43
hemoglobin_subunit_beta	.....MVHLTPPEEKSAVTSLGKVN..VDEVEGGALGRLLVVYPWTQRF	43
hemoglobin_subunit_gamma-2	.....MGHFTEEDKATITSLGKVN..VEDAGGETLGRLLVVYPWTQRF	43
hemoglobin_subunit_gamma-1	.....MGHFTEEDKATITSLGKVN..VEDAGGETLGRLLVVYPWTQRF	43
hemoglobin_subunit_epsilon	.....MVHFTAEKAAVTSLSKMN..VEEAGGEGALGRLLVVYPWTQRF	43
hemoglobin_subunit_alpha	.....MVLSPADKTNKAAAGKVGAAHAGEYGAALERMFLLSFPTTKTYF	44
hemoglobin_subunit_theta-1	.....MALSAEDRALVRALKKLGSNVGVYTTALERTFLAFPAIKTYF	44
hemoglobin_subunit_zeta	.....MSLTKTERTIIVSMAKIISTQADTIGTETLERLFLSHPTQKTYF	44
hemoglobin_subunit_mu	.....MLSAQERAQIAQVVDLIAGHEAQFGAELLRLFTVYVPSIKVYF	43
cytoglobin	MEKVPGEMEIERRERSEELSEAFERKVAQMMARLYANCEDVGVAILVRFVNF	60
myoglobin	.....MGLSDGEWQLVNLVNGKVEADIPGHGQGVILIRLFKGFHPETLEK	144
neuroglobin	.....MERPEPELIRQSRVAVSRSPLEHGTVLFAARLFALEPDLLPLF	142

hemoglobin_subunit_delta	ESFG.DLSSPDAYMGNPKVKAHGKKVLAGFSDGLAHLDN...LKGFTSQLSELHCDKLHV	99
hemoglobin_subunit_beta	ESFG.DLSTPDAYMGNPKVKAHGKKVLAGFSDGLAHLDN...LKGFTATLSELHCDKLHV	99
hemoglobin_subunit_gamma-2	DSFG.NLSSASAIMGNPKVKAHGKKVLTSLGDAIKHLDD...LKGTFQAQLSELHCDKLHV	99
hemoglobin_subunit_gamma-1	DSFG.NLSSASAIMGNPKVKAHGKKVLTSLGDAIKHLDD...LKGTFQAQLSELHCDKLHV	99
hemoglobin_subunit_epsilon	DSFG.NLSSPAILGNPKVKAHGKKVLTSLGDAIKHMDN...LKPFAQLSELHCDKLHV	99
hemoglobin_subunit_alpha	PHF..DLSH....GSAQVKGHGKKVADALTNAAVHVD...MPNALSALSDLHAHLRV	94
hemoglobin_subunit_theta-1	SHL..DLSP....GSSQVRAHGKQVADALSLAVERLDD...LPHALSLSHLHACQLRV	94
hemoglobin_subunit_zeta	PHF..DLHP....GSAQLRAHGSKVVAAVGDAYKSIDD...IGGALSKLSELHAYILRV	94
hemoglobin_subunit_mu	PHL..SACQ....DAQLLSSGQRMVAAVGAAVQHVDN...LRAALSPLADHALVLRV	93
cytoglobin	SQFK.HMEDPLEMERSQLRKHACRVMGALNTVVENLHDPDKVSSVLAALVGKHALKHKV	119
myoglobin	DKFK.HLKSEDEMKASEDLKKIGATVLTALGGILKKGKH...HEAEIKPLAQSHATKHKI	100
neuroglobin	QYNCRFSSPEDCLSSPEFLDHIRKVMVLVIDAAVTNVEDLSSLEEYLASLGRKHR.AVGV	101

hemoglobin_subunit_delta	DPENFRLLGNVLVCLVARNFGKEFTPQMOAAVYQKVVAGVANALAHKYH.....	147
hemoglobin_subunit_beta	DPENFRLLGNVLVCLVAHFFGKEFTPPVQAAVYQKVVAGVANALAHKYH.....	147
hemoglobin_subunit_gamma-2	DPENFKLLGNVLVTVLAIHFGKEFTPEVQASWQKMTVGVASALSSRYH.....	147
hemoglobin_subunit_gamma-1	DPENFKLLGNVLVTVLAIHFGKEFTPEVQASWQKMTVAVASALSSRYH.....	147
hemoglobin_subunit_epsilon	DPENFKLLGNVMVIIATHFGKEFTPEVQAAWQKLVSAVAIALAHKYH.....	147
hemoglobin_subunit_alpha	DPVNFLLSHCLVLTAAHLPAEFTPAVHASLDFLASVSTVLTSKYR.....	142
hemoglobin_subunit_theta-1	DPASFKLLGHCLVLTARHYPGDFSPALQASLDKFLSHVISAIVTSEYR.....	142
hemoglobin_subunit_zeta	DPVNFKLLSHCLVLTAAHFPADFTEAEAAAWDKFLSVSSVLTKEYR.....	142
hemoglobin_subunit_mu	DPANFLLIQCFHVVLASHLQDEFVQMOAAWDKFLTGVAVVLTKEYR.....	141
cytoglobin	EPVYFKILSGVILEVVAEEFASDFPETORAWAKLRGLIYSHVTAAYKEVGWVQVQPNAT	179
myoglobin	PVKYLEFISECIIVQLQSKHPGDFGADAQGANMKALELFRKDMASNKELGFQGG.....	154
neuroglobin	KLSSFTVQESLTYMLEKCLGPAFTPATRAAWSQLYGAIVVQAMSRGWDE.....	151

hemoglobin_subunit_delta	.....	147
hemoglobin_subunit_beta	.....	147
hemoglobin_subunit_gamma-2	.....	147
hemoglobin_subunit_gamma-1	.....	147
hemoglobin_subunit_epsilon	.....	147
hemoglobin_subunit_alpha	.....	142
hemoglobin_subunit_theta-1	.....	142
hemoglobin_subunit_zeta	.....	142
hemoglobin_subunit_mu	.....	141
cytoglobin	TPPATLPSSGP	190
myoglobin	.....	154
neuroglobin	.....	151

non conserved
 ≥ 50% conserved
 all match

Figure 1: Protein MSA with Chemical Similarity Highlighting