

hemoglobin_subunit_delta	.....MVLTPPEEKSAVTSLWGKVN..VEDAGGEGALGRLLVVYPWTQRF	43
hemoglobin_subunit_beta	.....MVLTPPEEKSAVTSLWGKVN..VEDAGGEGALGRLLVVYPWTQRF	43
hemoglobin_subunit_gamma-2	.....MGHFTEEDKATITSLWGKVN..VEDAGGEGTLGRLLVVYPWTQRF	43
hemoglobin_subunit_gamma-1	.....MGHFTEEDKATITSLWGKVN..VEDAGGEGTLGRLLVVYPWTQRF	43
hemoglobin_subunit_epsilon	.....MVHFTAEKAAVTSLSKMN..VEEAGGEGALGRLLVVYPWTQRF	43
hemoglobin_subunit_alpha	.....MVLSPADKTNKAAWGKVGAHAGEYGAALERMFLSFPTTKTYF	44
hemoglobin_subunit_theta-1	.....MALSAEDRALVRAIKKLGSNVGVYTTALERTFLAFPATKTYF	44
hemoglobin_subunit_zeta	.....MSLTKTERTIIVSMAKIISTQADTIGTETLERLFLSHPTKTYF	44
hemoglobin_subunit_mu	.....MLSAQERAQIAQVVDLIAGHEAQFGAELLRLFTVYPSIKVYF	43
cytoglobin	MEKVPGEMEIERRERSEELSEARKAQAAMARLYANCEDVGVAIVRFVNFPSAKQV	60
myoglobin	.....MGLSDGEGWQLVLNVGKVEADIPGHGQGVILIRLFKGFHPETLEK	44
neuroglobin	.....MERPEPELIRQSRARVSRSPLEHGTVLFAERLFALEPDLLPL	42

hemoglobin_subunit_delta	ESFG.DLSSPDAYMGNPKVKAHGKKVLGAFSDGLAHLDN...LKGTFSQLSELHCDKLVH	99
hemoglobin_subunit_beta	ESFG.DLSTPDAYMGNPKVKAHGKKVLGAFSDGLAHLDN...LKGTFTLSELHCDKLVH	99
hemoglobin_subunit_gamma-2	DSFG.NLSSASAIMGNPKVKAHGKKVLTSLGDIAIKHLDD...LKGTFAQLSELHCDKLVH	99
hemoglobin_subunit_gamma-1	DSFG.NLSSASAIMGNPKVKAHGKKVLTSLGDIAIKHLDD...LKGTFAQLSELHCDKLVH	99
hemoglobin_subunit_epsilon	DSFG.NLSSPAILGNPKVKAHGKKVLTSLGDAIKHMDN...LKPAFAKLSLHCDKLVH	99
hemoglobin_subunit_alpha	PHF..DLSH....GSAQVKGHGKKVADALTNAAVHVD...MPNALASDLHAHKLVR	94
hemoglobin_subunit_theta-1	SHL..DLSP....GSSQVRAHGKQVADALSLAVERLDD...LPHALASLHLHACQLVR	94
hemoglobin_subunit_zeta	PHF..DLHP....GSAQLRAHGSKVVAAVGDVAKSIDD...IGGALSKLSLHAYILVR	94
hemoglobin_subunit_mu	PHL..SACQ....DATQLLSSQRMVAAVGAAVQHVDN...LRAALSPDLHALVLRV	93
cytoglobin	SQFK.HMEDPLEMERSPQLRKHACRVMGALNTVVENLHDPDKVSSVLALVGKAHALKHKV	119
myoglobin	DKFK.HLKSEDEMKASEDLKKKGGATVLTALGGILKKGKH...HEAEIKPLAQSHATKHKI	100
neuroglobin	QYNCRQFSPEPDLCSSEFELDITRKVMLVIDAAVTVNDELSSLEEYLASLGRKHR.AVGV	101

hemoglobin_subunit_delta	DPENFRLLGNVLVCLVARNFGKEFTPPQMOAAVYQVVAGVANALAHKYH.....	147
hemoglobin_subunit_beta	DPENFRLLGNVLVCLVAHFFGKEFTPPVQAAVYQVVAGVANALAHKYH.....	147
hemoglobin_subunit_gamma-2	DPENFKLLGNVLVTVLAHFFGKEFTPEVQASWQKVMVTGVASALSSRYH.....	147
hemoglobin_subunit_gamma-1	DPENFKLLGNVLVTVLAHFFGKEFTPEVQASWQKVMVTGVASALSSRYH.....	147
hemoglobin_subunit_epsilon	DPENFKLLGNVMVILIAHFFGKEFTPEVQAAWQKLVSAVAIALAHKYH.....	147
hemoglobin_subunit_alpha	DPVNFLLSHCLVLTAAHLPAEFTPAVHASLDFLASVSTVTSKYR.....	142
hemoglobin_subunit_theta-1	DPASFLLGNHCLVLTARHYPGDFSPALQASLDKFLSHVISAIVSEYR.....	142
hemoglobin_subunit_zeta	DPVNFLLSHCLVLTAAHFPADFTEAEHAAWDKFLSVSSVTEKYR.....	142
hemoglobin_subunit_mu	DPANFPLLCQCFHVVLAASHLQDEFVQMOAAWQKFLTGAAVVLTEKYR.....	141
cytoglobin	EPVYFKILSGVILEVVAEEFASDFPETORAWAKLRGLYSHVTAAYKEVGWVQVQPNAT	179
myoglobin	PVKYLEFISECITQVLQSKHPGDFGADAQGAAMKALELFRKDMASNKGELGFQG.....	154
neuroglobin	KLSSFTVQESLFLYMLEKCLGPAFTPATRAAVWSQLYGAIVVQAMSRGWDE.....	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