Name	AA	MW (Da)	BIP	Region	P-site	Modifying enzyme	Functional consequences
Cx26 =GJB2	226	26,215	9.11	NT	D2, T5 or S8 [1]#	?	Deafness mutation at S8 [1]
				CL	T123	PKA?	Possible $Cx26_{deaf}$ mutation: T123N [2,3]
				EL2	T177	Intracellular kinases or ecto-kinases [2]	Formation of docking interaction with the apposed hemichannel [2]
				EL2/TM4 border	S183 T186	Intracellular kinases or ecto-kinases [2]	- Regulating hemichannel docking [2,4] - Behaves as dominant-negative with Cx26 [4]
Cx31 =GJB3				CT	S263, S266	Casein kinase I	Decrease Cx31 turnover; increase intercellular communication [5]
Cx32 =GJB1	283	32,025	9.19	NT	T4, Y7, T8 or S11 [1]#	?	Charcot-Marie-Tooth disease mutations at Y7, T8, S11, N14 [1]
				CT	S229 [6]	PKC	?
				CT	S233 [1,6]	cAMP-dPK or PKC	Increased junctional conductance and an increase in intercellular gap junctional communication mediated by Cx32 gap junctions [7]
				CT	S240 [1]#	?	?
				CT	T243$ [8]	Epidermal growth factor receptor [9]	Possible role in regulating myelin homeostasis [8]
Cx36 =GJD2	321	36,093	8.95	CL	S110 [10-12]	CaMKII [10] PKA [11,12]	- Decreased gap junctional communication [11] - Possible increase in synaptic efficacy in the form of "run-up" of junctional conductance [10]
				CL	T111 [10]	CaMKII [10]	Possible increase in synaptic efficacy in the form of "run-up" of junctional conductance [10]
				CT	S293 [10-13]	CaMKII [10] PKA [11-13]	- Decreased gap junctional communication [11] - Influence permeability of Cx36 gap junction, but not the trafficking [13] - AII amacrine cell coupling strength [13] - Possible increase in synaptic efficacy in the form of "run-up" of junctional conductance [10]
				CT	S315 [10]	CaMKII [10]	Possible increase in synaptic efficacy

							in the form of "run-up" of junctional conductance [10]
Cx37 =GJA4	333	37,414	7.5	CT	S319 [14]	glycogen synthase kinase-3	Reduced gap junctional intercellular communication [14,15]
Cx40 =GJA5	358	40,38	8.81	CL or CT	S120 or S345#	PKA [16,17]	Increase in intercellular conductivity and permeability [18]
Cx43 =GJA1	382	43,008	8.96	CT	S244 [19]	?	?
				CT	Y247	v-SRC [20-22]	Reduced gap junctional communication [21,23,24]
				CT	S255	MAPK [23,25-27] P34^{cdc2}/cyclin B [28-30] PKA [31]	- Reduced gap junctional communication [23,25,29,30] - Reduced cell-cell coupling [32] Cx43 internalization and Cx turnover [28-30,33,34] - Gap junction mediated return of growth control [31]
				CT	S257 [35]	?	?
				CT	S262	MAPK [23,27] PKC [27,28,36-41] P34^{cdc2}/cyclin B [29,30,37] v-SRC [22] PKA [31]	- Reduced gap junctional communication [26-31,37-42] - Reduced hemichannel opening [36] cardioprotection [42,43] - Cx43 internalization and Cx turnover [29,30,34] - Gap junction mediated return of growth control [31,39,44]
				CT	Y265	v-SRC [20-22] MAPK [23,25]	- Regulation of the interaction between Cx43 and ZO-1 [45,46] - Reduced gap junctional communication [21,23,24]
				CT	S279/S282	MAPK [23,25-27,47] v-SRC [22] PKC [40] EGFR tyrosine kinase [48]	- Reduced gap junctional communication [31,40,47] - Gap junction closure [48]
				CT	S296 [35]	? CaMKII [19]	?
				CT	S297 [35]	?	?
				CT	S306 [35,49]	?	Maintained coupling [49]
				CT	Y313 [50,51]	EGFR [50]	Role in cell-cell or cell-matrix interactions (associated with the cytoskeleton) [50,51]

				CT	S314 [52,53]	CaMKII [19]	?
				CT	S325 [40,54-56] S328 [40,54,56] S330 [38,47,49]	CK1 [55]	- Regulation of gap junction formation [55] - Enhanced gap junctional communication [56]
				CT	S364	PKA [57-60]	- Enhanced gap junction assembly and coupling [57,60]
				CT	S365	PKC [28,37,38] PKA [61] ? CaMKII [19]	- Regulation of gap junction formation - Cx43 internalization and Cx turnover [40,62]
				CT	S368	PKC [28,37,38,40] v-SRC [22]	- Reduced gap junctional communication [38,40,42,63-67] - Reduced hemichannel opening [36] increase Cx43 gap junction-channel permeability, slightly reduced unitary conductance [38] and wound healing [65] - Cx43 internalization and Cx turnover [28,68]
				CT	S369 [35,61]	PKA [61] ? CaMKII [19]	No effect on gap junctional communication [61]
				CT	S372 [35,69]	PKC [69]	Maintained electrical coupling [69]
				CT	S373 [19,35,61,70]	PKA [61] Akt (PKB) [70] ? CaMKII [19]	No effect on gap junctional communication [61]
Cx45 =GJC1	396	45,47	6.9	CT	?	PKA [71]	Regulation of electrical intercellular conductance via modulation of the open probability of Cx45 gap junction channels [71]
				CT	S381 [72]#, S382 [72]#, S384 [72]#, S385 [72]#		Cx45 internalization and Cx turnover [72]
Cx46 =GJA3	435	47,41	6.15	CL and/or CT	Serine [73,74] Threonine [73,74 75]	PKC-gamma activation [73,74]	Regulation of gap junctions [73,74]

Cx44 = Bovine ortho-logue				CT	T238 [76]	GSK3 [76] MAPK [76]	?
				CT	S241 [76]	GSK3 [76]	?
				CT	S245 [76]	PKA [76] PKC [76]	?
				CT	T300 [76]	GSK3 [76] MAPK [76]	?
				CT	T303 [76]	GSK [76] MAPK [76] CK1 [76]	?
				CT	T328 [76] or S(329, S330) [76]	PKC [76]	?
Cx50 =GJA8	433	48,229	5.21	CL and/or CT	Serine [75] Threonine [75]	PKCgamma [75]	Regulation of cell-to-cell communication by decrease of Cx50 channel density assembled in gap junctions, and increase in of Cx50 hemichannels density in the plasma membrane [75]
Cx49 = Bovine ortho-logue				CL	S115 [76]	CK1 [76] ATM [76] DNAPK [76]	?
				CL	S118 [76]	CK1 [76]	?
				CL	S134 [76]	PKC [76]	?
				CT	S258 [76]	PKC [76]	?
				CT	S261 [76]	PKC [76]	?
				CT	S265 [76]	PKC [76]	?
				CT	S266 [76]	PKC [76]	?
				CT	S297 [76]	MAPK [76]	?
				CT	S300 [76]	PKC [76]	?
Cx45.6 = chicken ortho-logue				CT	S395	PKA [77]	Enhanced gap junction and hemichannel function [77]
				CT	S363	CKII [78]	- Stimulate Cx50 turnover [78,79] - Inhibits the cleavage of Cx50 by caspase-3 [78]
Cx56	510	55,857	8.74	CL	S118	PKC [80]	Decrease in intercellular communication and acceleration of Cx56 degradation [80]
				CT	S493	? [80]	?

Panx2	677	74,447	8.19	CT	S514	NDR1 [81]	Regulation of large pore channel [81]

"#" means suggested phosphorylation site
"$" means not proven