

**Table 1 Members of the EF-hand superfamily**

Protein	Aliases	Function	Reference
<b>CaM-like</b>			
calmodulin	-CaM	-promiscuous Ca <sup>2+</sup> sensor; regulates activity of kinases, phosphatases, ion channels, etc.	[1]
CLP	-human CaM-like protein	-expressed in mammary epithelial cells	[2]
CLSP	-calmodulin-like skin protein	-expressed in epithelial cells	[3]
yeast CaM		-Ca <sup>2+</sup> -dependent processes in yeast	[4]
plant CaMs		- <i>Arabidopsis</i> has 9 identified variants	[5]
troponin C		-skeletal and cardiac muscle contraction	[6]
caldendrin	-calp (calmodulin-like protein), CaBP1; calbrain	-neuronal protein; three variants; modulates Ca <sup>2+</sup> entry into the cytoplasm	[7]
myosin ELC	-myosin essential light chain	-molluscan muscle contraction; regulatory site	[8]
myosin RLC	-myosin regulatory light chain	-molluscan muscle contraction; structural site	[8]
squidulin		-light chain of myosin in axoplasm of squid	[9]
centrin	-caltractin	-cell cycle; four variants	[10]
CaVP	-Ca <sup>2+</sup> vector protein	-from <i>Amphioxus</i> ; binds Ca <sup>2+</sup> vector protein target (CaVPT)	[11]
calcineurin B	-CnB	-regulatory subunit of protein phosphatase calcineurin A	[12]
CHP	calcineurin B-homologous protein; p22	-exocytotic membrane traffic, inhibits GTPase-stimulated Na <sup>+</sup> /H <sup>+</sup> exchanger; two variants	[13]
tescalin		-homologous to CHP	[14]
SOS3		-plant salt tolerance	[15]
AtCBL2	- <i>Arabidopsis thaliana</i> calcineurin B-like protein, SCaBP (SOS3-like CaBPs)	-nine variants	[16]
CIB	-calcium- and integrin-binding protein, calmyrin, KIP	-platelet aggregation; binds integrin and presenilins	[17]
calglandulin		-snake venom gland protein	[18]
calglandulin-like protein	CAGLP	-human protein of unknown function	[19]
CML24	-TCH2	-CaM-like <i>Arabidopsis</i> protein; functions in responses to abscisic acid, daylength, ion stress	[20]
<b>SPEC-like</b>			
SPEC	- <i>Strongylocentrotus purpuratus</i> ectodermal Ca <sup>2+</sup> binding protein	-embryonic development	[21]
LPS	- <i>Lytechinus pictus</i> SPEC-resembling protein	-embryonic development	[22]
<b>Sarcoplasmic CaBPs (SCPs) and SCP-like</b>			
Invertebrate SCP	-including sarcoplasmic Ca <sup>2+</sup> -binding proteins form <i>Nereis</i> and <i>Amphioxus</i>	-Ca <sup>2+</sup> buffer	[23]
aequorin		-bioluminescence	[23]
obelin		-bioluminescence	[23]
calexcitin	-CE, cp20	-expressed in neuronal tissue; protein associated with learning; A and B isoforms	[24,25]
calerythrin		-prokaryotic CaBP; structurally similar to SCPs; from <i>Saccharopolyspora erythraea</i>	[26]
<b>Polcalcins</b>			
Aln g 4		-alder allergen	[27]
APC1	- <i>Arabidopsis</i> pollen calcium binding protein-1	- <i>Arabidopsis</i> allergen	[27]
Bet v 3 and 4		-birch pollen allergens	[27]
Bra n 1 and 2	-BPC1, <i>B. napus</i> pollen calcium binding protein-1	-oil seed rape allergens	[27]
Bra r 1 and 2		-turnip rape allergens	[27]
Cyn d 7		-Bermuda grass allergen	[27]
Jun o 4		-juniper allergen	[27]
Ole e 3 and 8		-olive allergen	[27]
Phl p 7		-timothy grass allergen	[27]
Syr v 3		-lilac allergen	[27]
<b>Neuronal Ca<sup>2+</sup> Sensors (NCS)</b>			
NCS-1	-frequenin	-regulation of neurotransmission; learning; channel regulation	[28]
neurocalcin	-hippocalcin	-endocytosis	[28]
hippocalcin		-phospholipase D activation; anti-apoptotic; MAP kinase signaling	[28]
recoverin		-light sensitivity; regulates rhodopsin kinase activity in photoreceptors	[28]
visinin		-modulates adenylyl cyclase activity; four variants	[29]

VILIP	-visinin-like proteins	-three variants; guanylyl cyclase activation	[28]
kChIPs	-Kv channel-interacting proteins (KchIPs)	- K <sup>+</sup> -channels regulation; 4 variants; repression of transcription	[28]
DREAM	-calnenilin, kChIP3	-transcriptional repressor; a member of the kChIPs; binds presenilin	[28]
GCAPs	-guanylyl cyclase activating protein;	-light sensitivity; eight variants	[30]
<b>Parvalbumins</b>			
parvalbumin	- $\alpha$ -parvalbumin	-binds excess Ca <sup>2+</sup>	[31]
oncomodulin	- $\beta$ -parvalbumin	-binds excess Ca <sup>2+</sup>	[31]
<b>S100s and S100-like</b>			
S100A1	- S100A( $\alpha\beta$ )	-regulation of energy metabolism; cardiac contractions	[32,33]
S100A2	-S100L, CaN19	-cytoskeleton organization; tumor repression	[33,34]
S100A3	-S100E	-disregulation associated with cancer	[32]
S100A4	-metastasin, calvasculin, CAPL	-cytoskeleton regulation; tumor promoting activity; cytokine-like when excreted	[32,33]
S100A5	-S100D		
S100A6	-calcyclin, CAPY, CABP	-cytoskeleton regulation	[33]
S100A7	-psoriasis, PSOR1	-chemotactic agent	
S100A8	-calgranulin A, CAGA, MRP8, CGLA	-forms dimer with S100A9; cytoskeleton regulation; propagates inflammation; cytokine-like when excreted	[32,33]
S100A9	-calgranulin B, CAGB, MRP14, CGLB	-forms dimer with S100A9; functions same as S100A8	[32,33]
S100A10		-cytoskeleton regulation; anti-inflammatory activity; acts independent of Ca <sup>2+</sup>	[32,33]
S100A11	-calgizzarin, S100C, MLN70	-cytoskeleton regulation	[33]
S100A12	-calgranulin C	-cytoskeleton regulation; proinflammatory activity; cytokine-like when excreted	[32,33]
S100A13		-cytokine-like when excreted	[32]
S100A14	-BCMP84		[32]
S100A15			[32]
S100A16	-S100F, DT1P1A7		[32]
S100B( $\beta\beta$ )	-S100 $\beta$	- regulation of energy metabolism; regulation of cell cycle; regulation of cytoskeleton; neuroprotective function; cytokine-like when excreted; Ca <sup>2+</sup> homeostasis	[32-34]
S100P		-tumor development; stimulation of cell proliferation and survival	[32,34]
calhepatin		-S100-like protein of <i>Lepidosiren paradoxa</i> liver	[35]
p26olf		-frog olfactory epithelium	[36]
calbindin D <sub>9k</sub>	-intestinal CaBP	-binds excess Ca <sup>2+</sup> and functions in intracellular Ca <sup>2+</sup> transport	[33]
trichohyalin		-multidomain: associates with keratin	[37]
profilaggrin		-multidomain: associates with keratin	[38]
repetin		-associates with keratin	[33]
EH domain	-Eps15 homology (EH) domain	-multidomain; used to form protein:protein interactions; involved in endocytosis and signal transduction; Ca <sup>2+</sup> serves a structural role	[39]
<b>Penta EF-Hand subfamily</b>			
calpain		-intracellular cysteine protease; both domain VI of large subunit and domain IV of small subunit contain 5 EF-hands; forms heterodimer between domain IV and VI	[40]
sorcini	-soluble resistance-related calcium binding protein	-drug resistance; Ca <sup>2+</sup> homeostasis through channel modulation; forms homodimer	[40]
granalcin		-granule membrane fusion and degranulation of neutrophils; forms homodimer	[40]
ALG-2	-apoptosis-linked gene 2	-apoptosis; can form heterodimers with peflin	[40]
peflin	-PEF protein with long N-terminal hydrophobic domain	-Ca <sup>2+</sup> signaling events in higher vertebrates; forms heterodimer with ALG-2	[40]
<b>Hexa EF-hand subfamily</b>			
calbindin D <sub>28k</sub>	-1 $\alpha$ ,24-dihydroxy vitamin D <sub>3</sub> -dependent CaBP	-found in intestinal epithelium and brain; possibly both buffer and sensor; neuroprotective agent	[41]
calretinin		-abundant in neuronal tissue; roles in both Ca <sup>2+</sup> buffering and as a Ca <sup>2+</sup> sensor	[41]

secretagoin		-suppresses cell growth	[42]
calsymin		-prokaryotic CaBP; from <i>Rhizobium etli</i> ; role in nitrogen fixation	[26]
<b>CREC subfamily</b>			
reticulocalbin		-regulated processes of ER	[43]
calumenin		-regulated processes of ER	[43]
ERC-55	-taipoxin-associated CaBP 49 (TCBP-49), E6-binding protein (E6BP)	-regulated processes of ER	[43]
crocalbin		-regulated processes of ER	[43]
Cab45		-regulated processes of Golgi lumen	[43]
<b>Spectrins</b>			
$\alpha$ -actinin		-multidomain; membrane cytoskeleton	[44]
spectrin		-multidomain; membrane cytoskeleton	[44]
dystrophin		-multidomain; membrane cytoskeleton	[44]
<b>EC-Domain-Containing Proteins</b>			
BM-40	-SPARC, osteonectin	-multidomain; secreted glycoprotein; anti-adhesive; binds $Ca^{2+}$ as a structural role	[45]
QR1		- multidomain; quail retina protein	[46]
SC1	-hevin	- multidomain; brain protein; adhesion modulator	[47,48]
testican	-SPOCKs	- multidomain; proteoglycan; three isoforms	[49]
tsc36		- multidomain; TGF- $\beta$ -induced protein	[50]
<b>Miscellaneous</b>			
Iba1	-ionized $Ca^{2+}$ -binding adaptor molecule 1	-membrane ruffling	[51]
TCBP-23	- <i>Tetrahymena pyriformis</i> CaBP	- $Ca^{2+}$ sensitive changes in ciliary beating	[52]
Flagellar calcium-binding protein	-FCaBP	- <i>Trypanosoma cruzi</i> protein; associates with flagellar membrane in $Ca^{2+}$ -dependent manner	[53]
CBP40	- $Ca^{2+}$ binding protein 40, LAV1-2	-expressed in the amoebae and plasmodia of <i>Physarum polycephalum</i>	[54]
nucleobindin	- $Ca^{2+}$ -binding 63 kDa bone protein; calnuc	-mineralized bone matrix component (extracellular); $Ca^{2+}$ storage in the Golgi; binds DNA	[55-57]
NEFA	-DNA binding, EF-hand, Acidic amino acid rich region	-related to nucleobindin; DNA binding protein	[58]
80K-H		- $Ca^{2+}$ channel modulator	[59]
calsensin		-small neuronal protein	[60]
<i>E. histolytica</i> CaBP		-from <i>Entamoeba histolytica</i>	[61]
CDPKs	- $Ca^{2+}$ -dependent protein kinases	-multidomain protein; found in plants and protists	[62]
ryanodine receptor		-multidomain protein; sarcoplasmic reticulum $Ca^{2+}$ channel	[63]
CaV1.2 channel		-multidomain; possibly involved in $Mg^{2+}$ regulation	[64]
Cbl		-multidomain; adaptor protein that functions as a negative regulator of many signaling pathways; unknown if structural or regulatory	[65]
diacylglycerol kinase	-DGK	-multidomain; regulation of cellular functions; isoforms $\alpha$ , $\beta$ , and $\gamma$ show varying levels of $Ca^{2+}$ sensitivity	[66]
phospholipase C		-multidomain; hydrolyzes phosphatidylinositol 4,5-bisphosphate to inositol-1,4,5-triphosphate and diacylglycerol	[67]
glycerol-3-phosphate dehydrogenase		-multidomain; FAD-dependent enzyme of the inner mitochondrial membrane	[68]
AIF-1	-allograft inflammatory factor-1	-multidomain; inflammation	[69]
AtCBG	- <i>Arabidopsis</i> $Ca^{2+}$ -binding GTPase	-ABA-mediated salt stress signaling	[70]

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**Table 2 Ca<sup>2+</sup>-binding ability of members of the EF-hand superfamily<sup>1</sup>**

Protein	# of EF-hands (functional/total)	K <sub>d</sub> s (M)	Positive Cooperativity	Notes	Reference
<b>S100s and S100-like</b>					
S100A1	1 <sup>ψ</sup> ,1 <sup>C</sup> /2	10 <sup>-4e</sup>	No		[1]
S100A2	1 <sup>ψ</sup> ,1 <sup>C</sup> /2	10 <sup>-4g</sup>	Yes		[2]
S100A3	1 <sup>ψ</sup> ,1 <sup>C</sup> /2	10 <sup>-2g</sup>	slightly negative	-Zn <sup>2+</sup> binding protein	[3]
S100A4	1 <sup>ψ</sup> ,1 <sup>C</sup> /2	10 <sup>-4g</sup>	Yes		[4]
S100A5	1 <sup>ψ</sup> ,1 <sup>C</sup> /2	10 <sup>-4</sup> ,10 <sup>-7g</sup>	Yes	-Cu <sup>2+</sup> binding impairs Ca <sup>2+</sup>	[5]
S100A6	1 <sup>ψ</sup> ,1 <sup>C</sup> /2	10 <sup>-4g</sup>	Yes		[4]
S100A8	1 <sup>ψ</sup> ,1 <sup>C</sup> /2	?	?		[6]
S100A9	1 <sup>ψ</sup> ,1 <sup>C</sup> /2	?	?		[7]
S100A11	1 <sup>ψ</sup> ,1 <sup>C</sup> /2	10 <sup>-4g</sup>	Yes		[8]
S100A12	1 <sup>ψ</sup> ,1 <sup>C</sup> /2	10 <sup>-8</sup> ,10 <sup>-5a</sup>	Yes	-in absence of Zn <sup>2+</sup> binds 1 Ca <sup>2+</sup> with an affinity of 10 <sup>-5</sup> M	[9]
S100A13	1 <sup>ψ</sup> ,1 <sup>C</sup> /2	10 <sup>-6</sup> , 10 <sup>-5g</sup>	Yes		[10]
S100B(ββ)	1 <sup>ψ</sup> ,1 <sup>C</sup> /2	10 <sup>-6</sup> ,10 <sup>-5a</sup>	No	-Zn <sup>2+</sup> increases Ca <sup>2+</sup> affinity, two different affinity sites	[11]
S100P	1 <sup>ψ</sup> ,1 <sup>C*/2</sup>	10 <sup>-7</sup> ,10 <sup>-4a</sup>	No		[12]
calhepatin	1 <sup>ψ</sup> ,1 <sup>C</sup> /2	10 <sup>-6</sup> ,10 <sup>-4a</sup>	No		[13]
calbindin D <sub>9k</sub>	1 <sup>ψ</sup> ,1 <sup>C</sup> /2	10 <sup>-7g</sup>	Yes		[14]
S100A7	1 <sup>C</sup> /2	?	n/a		[15]
S100A16	1 <sup>C</sup> /2	10 <sup>-4g</sup>	n/a		[16]
EH domain	1 <sup>C</sup> /2	variant specific	n/a	-both low and high affinities reported	[17-19]
p26olf	2 <sup>ψ</sup> ,2 <sup>p26olf/4</sup>	10 <sup>-5f</sup>	Yes		[20]
<b>Polcalcins</b>					
Bet v 4	2 <sup>C</sup> /2	?	?		[21]
<b>EC-domain-containing</b>					
testican	2 <sup>C</sup> /2	10 <sup>-5j</sup>	?	-disulphide bond in canonical EF-hand	[22]
BM-40	1 <sup>N</sup> ,1 <sup>C</sup> /2	10 <sup>-8j</sup>	?	-disulphide bond in canonical EF-hand	[23]
<b>Spectrins</b>					
α-actinin	2 <sup>C</sup> /2	?	Yes	-EF2 has a significantly higher affinity than EF1	[24]
α-spectrin	2 <sup>C</sup> /4	10 <sup>-4f</sup>	Yes		[25]
<b>Parvalbumins</b>					
parvalbumin	2 <sup>C*/3</sup>	10 <sup>-8g</sup>	No		[26]
oncomodulin	2 <sup>C*/3</sup>	10 <sup>-8</sup> ,10 <sup>-7j</sup>	No		[27]
<b>CaM-like</b>					
calmodulin	4 <sup>C</sup> /4	10 <sup>-7</sup> -10 <sup>-5g</sup>	Yes		[28]
troponin C	4 <sup>C*/4</sup>	10 <sup>-6</sup> ,10 <sup>-5f</sup>	Yes (high affinity) No (low affinity)	-structural and regulatory sites; structural sites can bind Mg <sup>2+</sup> ; EF1 in cardiac TnC is nonfunctional	[29]
CLSP	4 <sup>C*/4</sup>	10 <sup>-6</sup> , 10 <sup>-4g</sup>	Yes (high affinity) No (low affinity)	-structural and regulatory sites; structural sites can bind Mg <sup>2+</sup>	[30]
CLP	4 <sup>C</sup> /4	10 <sup>-5</sup> , 10 <sup>-4g</sup>	Yes (high affinity) No (low affinity)		[31]
calcineurin B	4 <sup>C</sup> /4	10 <sup>-7</sup> ,10 <sup>-5g</sup>	Yes		[32]
SOS3	4 <sup>N</sup> /4	?	?		[33]
centrin	1-4 <sup>C*/4</sup>	10 <sup>-6</sup> -10 <sup>-3g</sup>	No	-several variants which bind differing numbers of Ca <sup>2+</sup> and with different affinities; some have Ca <sup>2+</sup> /Mg <sup>2+</sup> sites	[34-36]
yeast CaM	3 <sup>C</sup> /4	10 <sup>-6f</sup>	Yes		[37]
caldendrin	3 <sup>C*/4</sup>	10 <sup>-6</sup> ,>10 <sup>-4f</sup>	Yes (high affinity)	- two sets of sites; in presence of physiological [Mg <sup>2+</sup> ] Ca <sup>2+</sup> does not bind weak site; five variants	[38]
CaVP	2 <sup>C</sup> /4	10 <sup>-7</sup> , 10 <sup>-4f</sup>	No		[39]
CHP	2 <sup>C</sup> /4	10 <sup>-8d</sup>	No		[40]
CIB	1 <sup>N*</sup> ,1 <sup>C</sup> /4	10 <sup>-7</sup> ,10 <sup>-6f</sup>	No		[41]
AtCBL2	2 <sup>N</sup> /4	?	most likely not	-EF-hands are unpaired	[42]
myosin RLC	1 <sup>N*/4</sup>	10 <sup>-6h</sup>	n/a	-from chicken gizzard	[43]
myosin ELC	1 <sup>N</sup> /4	<10 <sup>-6a</sup>	n/a		[44]
<b>Neuronal Ca<sup>2+</sup> sensors (NCS)</b>					
Frq1	3 <sup>C</sup> /4	10 <sup>-7</sup> -10 <sup>-5f</sup>	Yes	-unmyristoylated form binds Ca <sup>2+</sup> with higher affinity and no apparent positive cooperativity	[45]
neurocalcin	3 <sup>C*/4</sup>	10 <sup>-7</sup> -10 <sup>-6i</sup>	Yes	-unmyristoylated form binds Ca <sup>2+</sup> with higher affinity and no apparent positive cooperativity	[46]
GCAPs	3 <sup>C*/4</sup>	10 <sup>-7b</sup>	Yes (some variants)		[47,48]
NCS-1	3 <sup>C*/4</sup>	10 <sup>-8</sup> -10 <sup>-5f</sup>	Yes	-number of Ca <sup>2+</sup> bound and affinity dependent on state of myristoylation; unmyristoylated form binds Ca <sup>2+</sup> with no apparent positive cooperativity	[49]
DREAM	1 <sup>N*</sup> ,2 <sup>C</sup> /4	10 <sup>-6</sup> ,low <sup>j</sup>	Yes	-two sets of sites; high affinity sites display positive	[50]

kChIPs	2 <sup>C</sup> /4	?	?	cooperativity in presence of Mg <sup>2+</sup>	[51]
VILIP	2 <sup>C</sup> /4	10 <sup>-6</sup> , 10 <sup>-4g</sup>	No		[52]
recoverin	2 <sup>C</sup> /4	10 <sup>-5f</sup>	Yes	-unmyristoylated form binds Ca <sup>2+</sup> with higher affinity and no apparent cooperativity	[53]
<b>SCPs and SCP-like</b>					
NSCP	3 <sup>C*</sup> /4	10 <sup>-7</sup> -10 <sup>-6g</sup>	Yes		[54]
calerythrin	3 <sup>C</sup> /4	10 <sup>-9</sup> -10 <sup>-8a</sup>	Yes between paired sites	-two sets of sites	[55]
aequorin	3 <sup>C*</sup> /4	10 <sup>-5g</sup>	?		[56]
obelin	3 <sup>C*</sup> /4	?	?		[57]
calexcitin B	3 <sup>C</sup> /4	10 <sup>-7</sup> -10 <sup>-6f</sup>	Yes		[58]
calexcitin A	2 <sup>*</sup> /4	10 <sup>-7c</sup>	?	-may contain a third functional EF-hand	[59]
<b>Penta EF-hand sub-family</b>					
calpain domains IV and VI	1 <sup>PEF</sup> , 2 <sup>C</sup> /5	10 <sup>-5a</sup>	No	-Ca <sup>2+</sup> affinity sensitive to the activation state of calpain and the presence of a substrate	[60,61]
ALG-2	1 <sup>N(EF5)</sup> , 2 <sup>C</sup> /5	10 <sup>-6</sup> -10 <sup>-4g</sup>	Yes	-different variants have differing Ca <sup>2+</sup> binding abilities	[62,63]
sorcini	1 <sup>PEF</sup> , 1 <sup>C</sup> /5	10 <sup>-6a</sup>	?		[64]
grancalcin	1 <sup>PEF</sup> , 1 <sup>C</sup> /5	10 <sup>-5g</sup>	Yes		[65,66]
<b>Hexa EF-hand sub-family</b>					
calbindin D <sub>28k</sub>	4 <sup>C*</sup> /6	10 <sup>-7</sup> -10 <sup>-6g</sup>	Yes		[67]
calretinin	4 <sup>C</sup> /6	10 <sup>-6</sup> , 10 <sup>-4g</sup>	Yes		[68]
secretagogin	4 <sup>C</sup> /6	10 <sup>-8</sup> -10 <sup>-4g</sup>	Yes		[69]
<b>CREC-subfamily</b>					
calumenin	7 <sup>C</sup> /7	10 <sup>-4g</sup>	No		[70]
reticulocalbin	4 <sup>C</sup> /6	?	?		[71]
<b>Miscellaneous</b>					
<i>E. histolytica</i> CaBP	4 <sup>C*</sup> /4	10 <sup>-6</sup> -10 <sup>-3g</sup>	Yes	-no cooperativity observed in presence of Mg <sup>2+</sup>	[72]
CDPK	3-4 <sup>C</sup> /4	10 <sup>-6</sup> -10 <sup>-5f</sup>	Isoform dependent	-various isoforms have different Ca <sup>2+</sup> -binding abilities; some isoforms display negative cooperativity	[73]
CBP40	4 <sup>C</sup> /4	10 <sup>-8</sup> -10 <sup>-6i</sup>	Negative	-EF1 lacks the N-terminal helix	[74]
FCaBP	2 <sup>C</sup> /4	10 <sup>-5</sup> -10 <sup>-4j</sup>	No		[75]
nucleobindin	2 <sup>C</sup> /2	10 <sup>-5a</sup>	Yes		[76]
NEFA	2 <sup>C</sup> /2	10 <sup>-8</sup> -10 <sup>-7f</sup>	No		[77]
calsensin	2 <sup>C</sup> /2	?	?		[78]
ryanodine receptor	2 <sup>C</sup> /2	10 <sup>-4</sup> -10 <sup>-3g</sup>	Yes		[79]
tescalin	1 <sup>C*</sup> /4	10 <sup>-7g</sup>	n/a		[80]
Cbl	1 <sup>N</sup> /2	high	n/a		[81]
Iba1	1 <sup>N</sup> /2	weak	n/a		[82]
CaV1.2 channel	1 <sup>*</sup> /1	10 <sup>-4a</sup>	n/a	-binds Mg <sup>2+</sup>	[83]

<sup>1</sup> Due to the fact that there is no standardization of methods and protocols used to determine Ca<sup>2+</sup> affinities, only the magnitudes of the Ca<sup>2+</sup> dissociation constants are indicated. As well, since ionic strength influences Ca<sup>2+</sup> affinity the amount of salt used in each study is also included.

<sup>C</sup> canonical EF-hand

<sup>ψ</sup> pseudo EF-hand

<sup>N</sup> noncanonical

\* also binds Mg<sup>2+</sup> with physiological significance

<sup>a</sup> no salt

<sup>b</sup> 40mM KCl

<sup>c</sup> 50mM KCl

<sup>d</sup> 60mM KCl

<sup>e</sup> 90mM KCl

<sup>f</sup> 100mM KCl

<sup>g</sup> 150mM KCl

<sup>h</sup> 50mM NaCl

<sup>i</sup> 100mM NaCl

<sup>j</sup> 150mM NaCl

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