Supplementary Table S1: Available PDB structures of mechanosensitive channels.

Protein name	PDB number	Organism	Structural family	Remarks	Reference
Mechanosensitive channel of small conductance (MscS)	2OAU	*E. coli*	MscS	Version 1.2	[33]
Mechanosensitive channel of large conductance (MscL)	2OAR	*M. tuberculosis*	MscL	Version 1.3	
C-terminal domain truncation of the *Mycobacterium tuberculosis* mechanosensitive channel of large conductance MscL	6CTD	*M. tuberculosis*	MscL	Version 1.1	[107]
Open structure of MscS	2VV5	*E. coli*	MscS	Version 1.1	[108]
Cryo-EM structure of mechanosensitive channel MscS in PC-10 nanodiscs	6VYL	*E. coli*	MscS	Version1.2 Related structure 6VYK, 6VYL, 6VYM	[46]
Cryo-EM structure of mechanosensitive channel MscS in PC-18:1 nanodiscs treated with beta-cyclodextran	6VYM	*E. coli*	MscS	Version 1.2	
Cryo-EM structure of mechanosensitive channel MscS in PC-18:1 nanodiscs	6VYK	*E. coli*	MscS	Version 1.2	
MscS Nanodisc	6PWP	*E. coli*	MscS	Version 1.0 Related structure 6PWN, 6PWO, 6PWP	[34]
MscS Nanodisc with N-terminal His-tag	6PWN	*E. coli*	MscS	Version 1.0	
Mscs DDM	6PWO	*E. coli*	MscS	Version 1.0	
Structure of the mechanosensitive channel MscS embedded in the membrane bilayer	6RLD	*E. coli*	MscS	Version 1.2	[109]
MTSSL spin labeled D67C mutant of MscS in the open form	4AGE	*E. coli*	MscS	Version 1.2	[110]

				Related Structures: 4AGE, 4AGF	
MTSSL spin labeled L124C mutant of MscS in the open form	4GF	*E. coli*	MscS	Version 1.2	
Structure of a tetrameric MscL in an expanded intermediate state	3HZQ	*S. aureus*	MscL	Version 1.3 see also: *S. aureus* MscL is pentameric *in vivo*[111]	[112]
MscS D67R1 high resolution	5AJI	*E. coli*	MscS	Version 1.2	[113]
Cryo-EM structure of mechanosensitive channel MscS reconstituted into peptidiscs	6UZH	*E. coli*	MscS	Version 1.1	[114]
Mechanosensitive channel MscS solubilized with DDM in closed conformation	7ONL	*E. coli*	MscS	Version 1.0 Related structure: 7ONJ, 7ONL, 7OO0, 7OO6, 7OO8, 7OOA	[115]
Mechanosensitive channel MscS solubilized with DDM in closed conformation with added lipid	7OO6	*E. coli*	MscS	Version 1.0	
Mechanosensitive channel MscS solubilized with DDM in open conformation	7OO0	*E. coli*	MscS	Version 1.0	
Mechanosensitive channel MscS solubilized with LMNG in open conformation	7ONJ	*E. coli*	MscS	Version 1.0	
Mechanosensitive channel MscS solubilized with LMNG in open conformation with added lipid	7OOA	*E. coli*	MscS	Version 1.0	
Mechanosensitive channel MscS solubilized with LMNG in closed conformation with added lipid	7OO8	*E. coli*	MscS	Version 1.0	
Cryo-EM structure of MscS channel YnaI	5Y4O	*E. coli*	MscS	Version 1.0	[116]
Crystal structure of a membrane protein	3UDC	*Caldanaerobacter subterraneus*	MscS	Version 1.2 Related structure: 3T9N, 3UDC	[117]

Crystal structure of a membrane protein	3T9N	*Caldanaerobacter subterraneus*	MscS	Version 1.1	
Crystal structure of *Helicobacter pylori* MscS (closed state)	4HW9	*H. pylori*	MscS	Version 1.2 Related Structures: 4HW9, 4HWA	[118]
Crystal Structure of *E. coli* MscS wild type (open state)	4HWA	*E. coli*	MscS	Version 1.1	
small conductance mechanosensitive channel YbiO	7A46	*E. coli*	MscS	Version 1.1 Related Structures: 6ZYD, 6ZYE, 7A46	[119]
YnaI	6ZYD	*E. coli*	MscS	Version 1.0	
YnaI in an open-like conformation	6ZYE	*E. coli*	MscS	Version 1.0	
Low conductance mechanosensitive channel YnaI	7N4T	*E. coli*	MscS	Version 1.0	[120]
Extended sensor paddles with bound lipids revealed in mechanosensitive channel YnaI	6URT	*E. coli*	MscS	Version 1.0	[121]
Structure of the C-terminal domain of the *E. coli* mechanosensitive channel of large conductance	4LKU	*E. coli*	MscL	Version 1.2	[122]
Mechanosensitive channel MscS K180R mutant	7DLU	*P. aeruginosa*	MscS	Version 1.0	[123]