![BIO-RAD]

Gene Pulser MXcell™ Electroporation System
Pre Set Protocols

Protocol name	Plate Used	When to use
Opt mini 96 well/ Sqr, Exp	96	Use to rapidly determine optimal waveform and conditions
Opt mini 96 well/ Sqr	96	Use to rapidly to determine optimal conditions for square-wave protocols
Opt mini 96 well/ Exp	96	Use to rapidly determine optimal conditions for exponential protocols
Opt 96 well/ Sqr, NP, D	96	Use after optimal square-wave conditions have been determined to enhance cell viability and improve efficiency
96 well/ Exp	96	Use for initial protocol set-up for many cell types
24 well/ Exp	24	Use for initial protocol set-up for many cell types
12 well/ Exp	12	Use for initial protocol set-up for many cell types
96 well/ Sqr	96	Use for initial protocol set-up for many cell types
24 well/ Sqr	24	Use for initial protocol set-up for many cell types
12 well/ Sqr	12	Use for initial protocol set-up for many cell types
96 well/ Exp, Vgrad,Cgrad	96	Use when working with new cells lines that traditionally apply exponential waveforms. This protocol fine tunes conditions and includes replicates
96 well/Sqr, Vgrad, Dgrad	96	Use when working with new cells lines or when Sqr protocols are normally applied. This protocol fine tunes conditions and includes replicates
Opt 96 well/ Exp, Sqr	96	Use with cell line with no protocol reference. This protocol includes a range of average starting conditions
Opt 24 well/ Exp, Sqr	24	Use with cell line with no protocol reference. This protocol includes a range of average starting conditions
Opt 12 well/ Exp, Sqr	12	Use with cell line with no protocol reference. This protocol includes a range of average starting conditions
Uniform 96 well/ Exp, Sqr	96	Use with a set of defined conditions to compare different cell lines and electroporation of different molecules within the same or different cell lines
Uniform 24 well/ Exp, Sqr	24	Use with a set of defined conditions to compare different cell lines and electroporation of different molecules within the same or different cell lines
Uniform 12 well/ Exp, Sqr	12	Use with a set of defined conditions to compare different cell lines and electroporation of different molecules within the same or different cell lines
Mixed 96 well/E xp, Sqr	96	Use for mixing different waveforms. Alternating rows of exponential (250 V/350 uf) and square waves (250 V/20 ms)
Mixed 24 well/ Exp, Sqr	24	Use for mixing different waveforms. Alternating rows of exponential (250 V/350 uf) and square waves (250 V/20 ms)
Mixed 12 well/ Exp, Sqr	12	Use for mixing different waveforms. Alternating rows of exponential (250 V/350 uf) and square waves (250 V/20 ms)

NOTE: Pre-set protocols follow these easy nomenclature rules: A 3–8 letter descriptor in the beginning defines the purpose of the protocol and is followed by the type of electroporation plate. For general protocols, the plate type is found in the beginning. A slash follows with the type of waveform where Exp is exponential and Sqr is squarewave. Following the waveform are specific parameters varied where: V is voltage; R is resistance; C is capacitance; D is pulse duration; NP is number of pulses; and Grad is gradient.