#12889 Store at -20°C

hERG1a (D1Y2J) Rabbit mAb

☑ 100 µl
(10 western blots)

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New 08/13

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Entrez Gene ID #3757
UniProt ID #Q12809

Applications	Species Cross-Reactivity*	Molecular Wt.	Isotype
W, IP Endogenous	H, R, (Mk)	135, 155 kDa	Rabbit IgG**

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at –20°C. *Do not aliquot the antibody.*

***Species cross-reactivity is determined by western blot.**

****Anti-rabbit secondary antibodies must be used to detect this antibody.**

Recommended Antibody Dilutions:

Western blotting	1:1000
Immunoprecipitation	1:50

For product specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

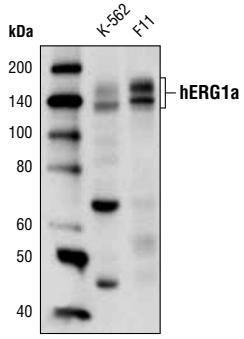
Background: hERG1(human ether-a-go-go-related gene potassium channel 1) is a voltage gated potassium channel alpha-subunit which mediates the rapidly activating component of the delayed rectifying potassium current in heart (IKr) (1,2). The hERG channel is composed of two subunits, 1a and 1b, which differ at amino terminus due to alternative splicing. Native hERG channels are heteromers of hERG1a with hERG1b. Both subunits contribute to IKr current (3-6).

Blockade of hERG currents induced by compounds or mutation of hERG encoding gene-KCNH2 causes ventricular arrhythmias associated with inherited and acquired long QT syndrome and cardiomyocyte apoptosis (7-10). Therefore, hERG channel is a primary target for the development of class III antiarrhythmic agents (11,12). The hERG channel is also inhibited by a variety of non-antiarrhythmic compounds, which result in side effects. Consequently, hERG channel blockage is a common counter screen when selecting therapeutic agents for various diseases (11,13,14).

Research studies have implicated hERG in cancer cell survival (15). In normal human adult tissue, hERG is expressed in heart, brain, myometrium, pancreas, and hematopoietic progenitors (16,17). hERG is expressed in various cancer cell lines of epithelial, neuronal, leukemic, and connective tissue origin but not in corresponding normal cells (18-22). Furthermore, hERG expression is associated with enhanced cancer cell proliferation, invasiveness, and poor prognosis (23,24).

Specificity/Sensitivity: hERG1a (D1Y2J) Rabbit mAb recognizes endogenous levels of both mature and immature hERG1a protein. This antibody cross-reacts with proteins of unknown origin at 65 and 42 kDa in some cell lines. This antibody does not recognize hERG1b protein.

Source/Purification: Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues surrounding Ala223 of human hERG1a protein.



Western blot analysis of extracts from K-562 and F11 cells using hERG1a (D1Y2J) Rabbit mAb.

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IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

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Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.