

## Product datasheet for **TA328933**

### **Kcnh2 Rabbit Polyclonal Antibody**

#### **Product data:**

<b>Product Type:</b>	Primary Antibodies
<b>Applications:</b>	IP, WB
<b>Recommended Dilution:</b>	WB: 1:200-1:2000; IHC: 1:100-1:3000
<b>Reactivity:</b>	Human, Mouse, Rat
<b>Host:</b>	Rabbit
<b>Clonality:</b>	Polyclonal
<b>Immunogen:</b>	Peptide (CY)EEL PAGAP ELPQD GPT, corresponding to residues 1122-1137 of rat Kv11.1 (erg1) . Intracellular, C-terminal part.
<b>Formulation:</b>	Lyophilized. Concentration before lyophilization ~0.8mg/ml (lot dependent, please refer to CoA along with shipment for actual concentration). Buffer before lyophilization: Phosphate buffered saline (PBS), pH 7.4, 1% BSA, 0.025% NaN <sub>3</sub> .
<b>Reconstitution Method:</b>	Add 50 ul double distilled water (DDW) to the lyophilized powder.
<b>Purification:</b>	Affinity purified on immobilized antigen.
<b>Conjugation:</b>	Unconjugated
<b>Storage:</b>	Store at -20°C as received.
<b>Stability:</b>	Stable for 12 months from date of receipt.
<b>Gene Name:</b>	potassium voltage-gated channel subfamily H member 2
<b>Database Link:</b>	<a href="#">NP_446401</a> <a href="#">Entrez Gene 3757 Human</a> <a href="#">Entrez Gene 16511 Mouse</a> <a href="#">Entrez Gene 117018 Rat</a> <a href="#">O08962</a>



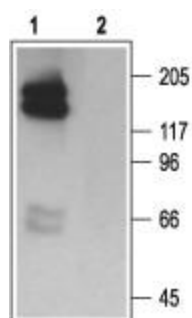
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**Background:**

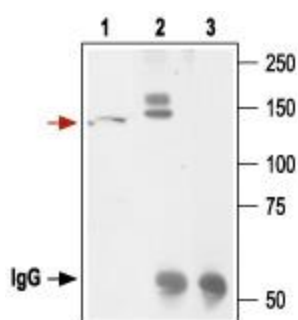
The KV11.1 (HERG) channel is a member of the ether-a-go-go (EAG) subfamily of voltage-dependent K<sup>+</sup> channels that includes the related proteins KV11.2 and KV11.3 (erg2 and erg3). KV11.1 possess the signature structure of the voltage-dependent K<sup>+</sup> channels: six membrane-spanning domains and intracellular N and C termini. The KV11.1 current is characterized by strong inward rectification with slow activation and very rapid inactivation kinetics. The channel is expressed in the brain and heart (where it underlies the IKr current) and has a central role in mediating repolarization of action potentials. Mutations in the KV11.1 channel cause inherited long QT syndrome (LQTS) or abnormalities in the repolarization of the heart that are associated with life-threatening arrhythmias and sudden death. All the identified KV11.1 mutations produce loss of function of the channel via several cellular mechanisms ranging from alterations of gating properties, alterations of channel permeability/selectivity and alterations in intracellular channel trafficking that decreases the number of channels that reach the cell membrane.<sup>1,2</sup> Lately drug-induced forms of LQTS have been reported for a wide range of non-cardiac drugs including antihistamines, psychoactive agents and antimicrobials. All these drugs potentially block the KV11.1 channel as an unintended side effect, prompting regulatory drug agencies to issue recommendations for the testing of new drugs for their potential KV11.1 blocking effect. In addition, KV11.1 expression was found to be upregulated in several tumor cell lines of different histogenesis suggesting that it confers the cells some advantage in cell proliferation. Indeed, in several studies it has been shown that inhibition of the KV11.1 current leads to a decrease in tumor cell proliferation.

**Synonyms:**

ERG; ERG1; H-ERG; HERG; HERG1; Kv11.1; LQT2; SQT1

**Product images:**

Western blot analysis of HEK 293 cell lysate, stably expressing HERG channels: 1. Anti-Kv11.1 (erg1) antibody (1:200). 2. Anti-Kv11.1 (erg1) antibody, preincubated with the control antigen.



Immunoprecipitation of the lysate of HEK 293 cells, stably expressing HERG with Anti-Kv11.1 (erg1) antibody : 1. Cell lysate. 2. Cell lysate + protein A beads + Anti-Kv11.1 (erg1). 3. Cell lysate + protein A beads + pre-immune rabbit serum. Red arrow indicates the Kv11.1 protein while the black arrow shows the IgG heavy chain. Immunoblot was performed with the Anti-Kv11.1 (erg1).