

Kv7.2

Cat.No. 368 103; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Rabbit serum albumin was added for stabilization. For reconstitution add 50 µl H ₂ O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1 : 1000 (AP staining) IP: not tested yet ICC: not tested yet IHC: 1 : 500 IHC-P/FFPE: 1 : 500
Immunogen	Synthetic peptide corresponding to AA 16 to 37 from mouse Kv7.2 (UniProt Id: Q9Z351-1)
Reactivity	Reacts with: rat (O88943), mouse (Q9Z351). Other species not tested yet.
Specificity	Specific for Kv7.2.
matching control	368-1P

Selected General References

The Kv7.2/Kv7.3 heterotetramer assembles with a random subunit arrangement. Stewart AP, Gómez-Posada JC, McGeorge J, Rouhani MJ, Villarroel A, Murrell-Lagnado RD, Edwardson JM. The Journal of biological chemistry (2012) 287(15): 11870-7.

Colocalization and coassembly of two human brain M-type potassium channel subunits that are mutated in epilepsy. Cooper EC, Aldape KD, Abosch A, Barbaro NM, Berger MS, Peacock WS, Jan YN, Jan LY. Proceedings of the National Academy of Sciences of the United States of America (2000) 97(9): 4914-9.

Two types of K(+) channel subunit, Erg1 and KCNQ2/3, contribute to the M-like current in a mammalian neuronal cell. Selyanko AA, Hadley JK, Wood IC, Abogadie FC, Delmas P, Buckley NJ, London B, Brown DA. The Journal of neuroscience : the official journal of the Society for Neuroscience (1999) 19(18): 7742-56.

A novel potassium channel gene, KCNQ2, is mutated in an inherited epilepsy of newborns. Singh NA, Charlier C, Stauffer D, DuPont BR, Leach RJ, Melis R, Ronen GM, Bjerre I, Quattlebaum T, Murphy JV, McHarg ML, et al. Nature genetics (1998) 18(1): 25-9.

TO BE USED IN VITRO / FOR RESEARCH ONLY

NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Five voltage gated potassium channels **Kv7**, encoded by the genes KCNQ 1-5, have been described in mammals so far. They are integral membrane proteins and show distinct distribution patterns. Kv7.2, **Kv7.3** and Kv7.5 are widely expressed in different brain regions whereas Kv7.1 and Kv7.4 show more restricted expression profiles.

Kv7.3 forms the M channel with either Kv7.2 or Kv7.5. This ion channel is a slowly activating and deactivating potassium channel that plays a critical role in the regulation of neuronal excitability.