10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

KCNQ4 Antibody (monoclonal) (M01)

Mouse monoclonal antibody raised against a partial recombinant KCNQ4.
Catalog # AT2603a

Product Information

Application	WB, E
Primary Accession	P56696
Other Accession	NM_004700
Reactivity	Human, Mouse
Host	mouse
Clonality	monoclonal
Isotype	IgG3 Kappa
Clone Names	2H6
Calculated MW	77101

Additional Information

Gene ID	9132
Other Names	Potassium voltage-gated channel subfamily KQT member 4, KQT-like 4, Potassium channel subunit alpha KvLQT4, Voltage-gated potassium channel subunit Kv74, KCNQ4
Target/Specificity	KCNQ4 (NP_004691, 596 a.a. ~ 695 a.a) partial recombinant protein with GST tag. MW of the GST tag alone is 26 KDa.
Dilution	WB~~1:500~1000 E~~N/A
Format	Clear, colorless solution in phosphate buffered saline, pH 7.2 .
Storage	Store at -20°C or lower. Aliquot to avoid repeated freezing and thawing.
Precautions	KCNQ4 Antibody (monoclonal) (M01) is for research use only and not for use in diagnostic or therapeutic procedures.

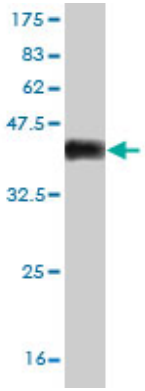
Background

The protein encoded by this gene forms a potassium channel that is thought to play a critical role in the regulation of neuronal excitability, particularly in sensory cells of the cochlea. The current generated by this channel is inhibited by M1 muscarinic acetylcholine receptors and activated by retigabine, a novel anti-convulsant drug. The encoded protein can form a homomultimeric potassium channel or possibly a heteromultimeric channel in association with the protein encoded by the KCNQ3 gene. Defects in this gene are a cause of nonsyndromic sensorineural deafness type 2 (DFNA2), an autosomal dominant form of progressive hearing loss. Two transcript variants encoding different isoforms have been found for this gene.

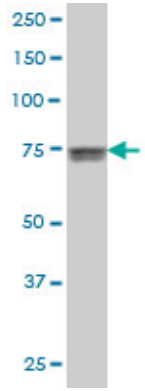
References

DFNA2 Nonsyndromic Hearing Loss Smith RJH, et al. , 1993. PMID 20301388.Replication of previous genome-wide association studies of bone mineral density in premenopausal American women. Ichikawa S, et al. J Bone Miner Res, 2010 Aug. PMID 20200978.Analysis of gene polymorphisms associated with K ion circulation in the inner ear of patients susceptible and resistant to noise-induced hearing loss. Pawelczyk M, et al. Ann Hum Genet, 2009 Jul. PMID 19523148.Audioprofile-directed screening identifies novel mutations in KCNQ4 causing hearing loss at the DFNA2 locus. Hildebrand MS, et al. Genet Med, 2008 Nov. PMID 18941426.KCNQ4 mutations associated with nonsyndromic progressive sensorineural hearing loss. Nie L. Curr Opin Otolaryngol Head Neck Surg, 2008 Oct. PMID 18797286.

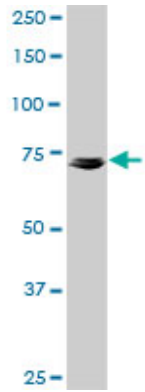
Images



Antibody Reactive Against Recombinant Protein.Western Blot detection against Immunogen (36.74 KDa) .

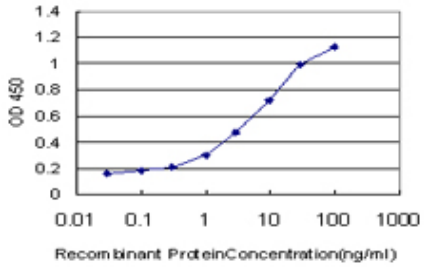


KCNQ4 monoclonal antibody (M01), clone 2H6 Western Blot analysis of KCNQ4 expression in IMR-32 ((Cat # AT2603a)



KCNQ4 monoclonal antibody (M01), clone 2H6. Western Blot analysis of KCNQ4 expression in NIH/3T3 ((Cat # AT2603a)

Detection limit for recombinant GST tagged KCNQ4 is approximately 1ng/ml as a capture antibody.



Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.