Purified anti-CKMT2 Antibody

Catalog# / Size	868701 / 25 µg 868702 / 100 µg
Clone	3F4-G5-H5
Regulatory Status	RUO
Other Names	Creatine Kinase, Mitochondrial 2
Isotype	Mouse IgG2b, κ
Description	CKMT2 is an isoform of the mitochondrial specific creatine kinase subunit that is mainly expressed in skeletal and heart muscle cells. CKMT2 exists in two different oligomeric forms: dimers and octamers. Recent studies have shown that the homooctameric form of CKMT2 is the predominant form in vivo and is critical to its function.

Product Details

Verified Reactivity	Human, Mouse, Rat
Antibody Type	Monoclonal
Host Species	Mouse
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography.
Concentration	0.5 mg/ml
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C.
Application	WB - *Quality tested* IHC-P, ICC - *Verified*
Recommended Usage	Each lot of this antibody is quality control tested by Western blotting. For Western blotting, the suggested use of this reagent is 0.5 - 10 µg per mL. For immunohistochemistry on formalin-fixed paraffin-embedded tissue sections, a concentration range of 0.5 - 10 µg/mL is suggested. For immunocytochemistry, a concentration of 10 µg/mL is recommended. It is recommended that the reagent be titrated for optimal performance for each application.
RRID	AB_2814623 (BioLegend Cat. No. 868701) AB_2814624 (BioLegend Cat. No. 868702)

Antigen Details

Structure	CKMT2 is a 419 amino acid protein with predicted and observed molecular mass of ~47 kD.
Distribution	Tissue Distribution: Mainly expressed in heart and skeletal muscle. Also expressed in brain. Cellular Distribution: Mitochondrion and cytosol
Function	CKMT2 plays a central role in energy transduction in tissues with large, fluctuating energy demands such as the brain.
Interaction	CKMT2 exists as octamer composed of four homodimers.
Biology Area	Mitochondrial Function, Neurodegeneration, Neuroscience
Molecular Family	Mitochondrial Markers
Antigen References	1. Zervou S, *et al*. 2017. *PLoS One*. 12(8):e0182994 2. Forsey KE, *et al*. 2013. *Mol Reprod Dev*. 80(3):185

3. Miceli MV, *et al*. 2005. *Exp Cell Res*. 302 (2):270

Gene ID 1160
76722
688698

Related Protocols

Immunocytochemistry Staining Protocol

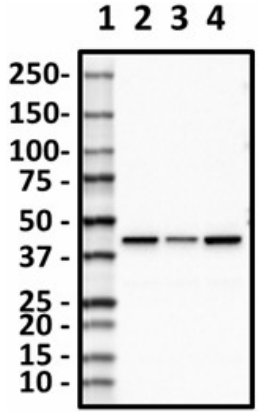
Western Blotting Protocol

Immunohistochemistry Protocol for Paraffin-Embedded Sections

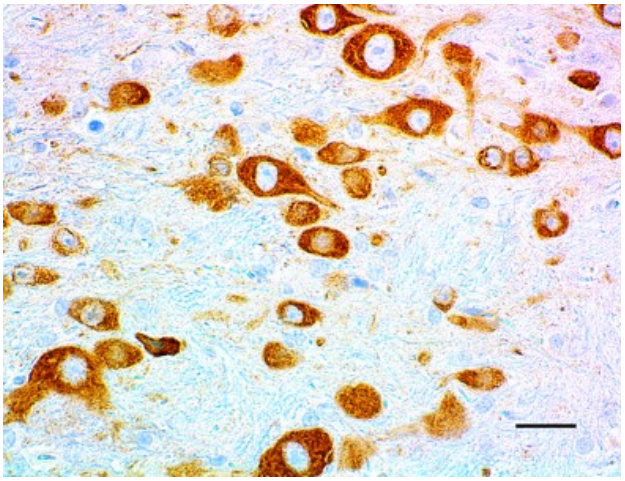
Other Formats

Purified anti-CKMT2

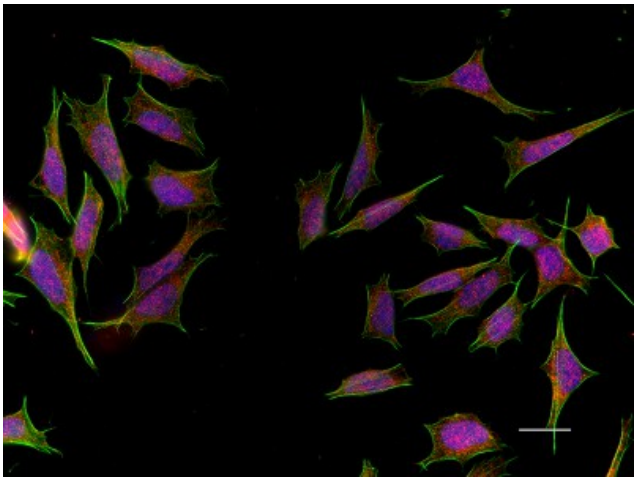
Product Data



Western blot of purified anti-CKMT2 antibody (clone 3F4-G5-H5). Lane 1: Molecular weight marker; Lane 2: 20 µg of human brain lysate; Lane 3: 20 µg of mouse brain lysate; Lane 4: 20 µg of rat brain lysate. The blot was incubated with 2 µg/mL of the primary antibody overnight at 4°C, followed by incubation with HRP-labeled goat anti-mouse IgG (Cat. No. 405306). Enhanced chemiluminescence was used as the detection system.



IHC staining of purified anti-CKMT2 antibody (clone 3F4-G5-H5) on formalin-fixed paraffin-embedded mouse brain tissue. Following antigen retrieval using Sodium Citrate H.I.E.R, the tissue was incubated with 0.5 µg/ml of the primary antibody overnight at 4°C. BioLegend's Ultra Streptavidin (USA) HRP Detection Kit (Multi-Species, DAB, Cat. No. 929901) was used for detection followed by hematoxylin counterstaining, according to the protocol provided. The image was captured with a 40X objective. Scale Bar: 50 µm



ICC staining of purified anti-CKMT2 (clone 3F4-G5-H5) on SH-SY5Y cell. The cells were fixed with 4% PFA, permeabilized with a buffer containing 0.1% Triton X-100 and 0.25% BSA, and blocked with 2% normal goat serum and 0.02% BSA. The cells were then incubated with 10 µg/mL of the primary antibody overnight at 4°C, followed by incubation with 2.5 µg/mL of Alexa Fluor® 594 goat anti-mouse IgG for one hour at room temperature. The cells were co-stained with Flash Phalloidin™ Green 488 (Cat. No. 424201). The slide was mounted with fluoromount G with DAPI. The image was captured with a 60X objective. Scale bar: 20 µm

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