SANTA CRUZ BIOTECHNOLOGY, INC.

FKBP12.6 (H-8): sc-376135



BACKGROUND

Immunophilins are a highly conserved family of *cis-trans* peptidyl-prolyl isomerases which bind to and mediate the effects of immunosuppressive drugs such as Cyclosporin, FK506 and Rapamycin. FKBP12.6, also known as FK506-binding protein 1B, is a 108 amino acid immunophilin belonging to the FKBP-type PPlase family. Subcellularly localized to the cytoplasm, FKBP12.6 binds to RyR in cardiac muscle sarcoplasmic reticulum and possibly plays a unique phys-iological role in excitation-contraction coupling in cardiac muscle. FKBP12.6 also catalyzes the *cis-trans* isomerization of proline imidic peptide bonds in oligopeptides. Ubiquitously expressed, FKBP12.6 is found at highest levels in brain and thymus. FKBP12.6 is expressed as two isoforms produced by alternative splicing.

CHROMOSOMAL LOCATION

Genetic locus: FKBP1B (human) mapping to 2p23.3; Fkbp1b (mouse) mapping to 12 A1.1.

SOURCE

FKBP12.6 (H-8) is a mouse monoclonal antibody raised against amino acids 38-108 mapping at the C-terminus of FKBP12.6 of human origin.

PRODUCT

Each vial contains 200 $\mu g\, lg G_1$ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

FKBP12.6 (H-8) is available conjugated to agarose (sc-376135 AC), 500 μg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376135 HRP), 200 μg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376135 PE), fluorescein (sc-376135 FITC), Alexa Fluor[®] 488 (sc-376135 AF488), Alexa Fluor[®] 546 (sc-376135 AF546), Alexa Fluor[®] 594 (sc-376135 AF594) or Alexa Fluor[®] 647 (sc-376135 AF647), 200 μg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-376135 AF680) or Alexa Fluor[®] 790 (sc-376135 AF790), 200 μg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

FKBP12.6 (H-8) is recommended for detection of FKBP12.6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

FKBP12.6 (H-8) is also recommended for detection of FKBP12.6 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for FKBP12.6 siRNA (h): sc-42891, FKBP12.6 siRNA (m): sc-42892, FKBP12.6 shRNA Plasmid (h): sc-42891-SH, FKBP12.6 shRNA Plasmid (m): sc-42892-SH, FKBP12.6 shRNA (h) Lentiviral Particles: sc-42891-V and FKBP12.6 shRNA (m) Lentiviral Particles: sc-42892-V.

Molecular Weight of FKBP12.6: 12 kDa.

Positive Controls: CCRF-CEM cell lysate: sc-2225, Jurkat whole cell lysate: sc-2204 or human heart extract: sc-363763.

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA





FKBP12.6 (H-8): sc-376135. Western blot analysis of FKBP12.6 expression in CCRF-CEM (**A**) and Jurkat (**B**) whole cell lysates and human heart (**C**), mouse cerebellum (**D**), mouse brain (**E**) and human brain (**F**) tissue extracts

FKBP12.6 (H-8): sc-376135. Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in tubules.

SELECT PRODUCT CITATIONS

- 1. Gant, J.C., et al. 2018. Aging-related calcium dysregulation in rat entorhinal neurons homologous with the human entorhinal neurons in which Alzheimer's disease neurofibrillary tangles first appear. J. Alzheimers Dis. 66: 1371-1378.
- Qin, L., et al. 2019. Ginsenoside Rb1 improved diabetic cardiomyopathy through regulating calcium signaling by alleviating protein O-GlcNAcylation. J. Agric. Food Chem. 67: 14074-14085.
- Sleiman, Y., et al. 2020. Modeling polymorphic ventricular tachycardia at rest using patient-specific induced pluripotent stem cell-derived cardiomyocytes. EBioMedicine 60: 103024.
- Wang, R., et al. 2020. Calenduloside E suppresses calcium overload by promoting the interaction between L-type calcium channels and Bcl2associated athanogene 3 to alleviate myocardial ischemia/reperfusion injury. J. Adv. Res. 34: 173-186.
- Wang, M., et al. 2021. Ginsenoside Rb1 ameliorates cardiotoxicity triggered by aconitine via inhibiting calcium overload and pyroptosis. Phytomedicine 83: 153468.
- Salazar-Enciso, R., et al. 2022. Aldosterone-induced sarco/endoplasmic reticulum Ca²⁺ pump upregulation counterbalances Ca_v1.2-mediated Ca²⁺ influx in mesenteric arteries. Front. Physiol. 13: 834220.
- Chen, L., et al. 2022. Chai-hu-san-shen capsule ameliorates ventricular arrhythmia through inhibition of the CaMKII/FKBP12.6/RyR2/Ca²⁺ signaling pathway in rats with myocardial ischemia. Evid. Based Complement. Alternat. Med. 2022: 2670473.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

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