SANTA CRUZ BIOTECHNOLOGY, INC.

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

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## 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 PPIase family. Subcellularly localized to the cytoplasm, FKBP12.6 binds to RyR in cardiac muscle sarcoplasmic reticulum and possibly plays a unique physiological 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 µg $IgG_1$ 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.

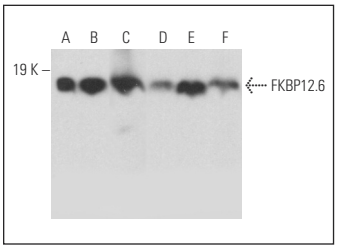
Molecular Weight of FKBP12.6: 12 kDa.

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

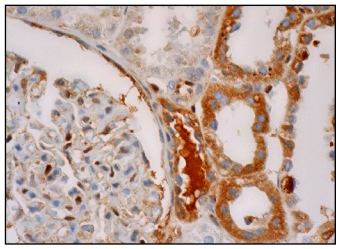
## STORAGE

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.
2. 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.
3. Sleiman, Y., et al. 2020. Modeling polymorphic ventricular tachycardia at rest using patient-specific induced pluripotent stem cell-derived cardiomyocytes. EBioMedicine 60: 103024.
4. Wang, R., et al. 2020. Calenduloside E suppresses calcium overload by promoting the interaction between L-type calcium channels and Bcl2-associated athanogene 3 to alleviate myocardial ischemia/reperfusion injury. J. Adv. Res. 34: 173-186.
5. Wang, M., et al. 2021. Ginsenoside Rb1 ameliorates cardiotoxicity triggered by aconitine via inhibiting calcium overload and pyroptosis. Phytomedicine 83: 153468.
6. Salazar-Enciso, R., et al. 2022. Aldosterone-induced sarco/endoplasmic reticulum $Ca^{2+}$ pump upregulation counterbalances $Ca_V1.2$-mediated $Ca^{2+}$ influx in mesenteric arteries. Front. Physiol. 13: 834220.
7. Chen, L., et al. 2022. Chai-hu-san-shen capsule ameliorates ventricular arrhythmia through inhibition of the CaMKII/FKBP12.6/RyR2/$Ca^{2+}$ 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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