SANTA CRUZ BIOTECHNOLOGY, INC.

CALCOCO2 (F-6): sc-376540

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

CALCOCO2 (calcium-binding and coiled-coil domain-containing protein 2), also known as NDP52 (nuclear dot protein 52), is a 446 amino acid protein that localizes to the perinuclear region of the cytoplasm and to nuclear dots, where it functions as a subunit of nuclear domain 10 (ND10) bodies. ND10 bodies are nuclear domains that are thought to be associated with the nuclear matrix and may have a role in the life cycles of various viruses, such as HSV-1. Expressed ubiquitously with highest expression in skeletal muscle, CALCOCO2 exists as a complex with proteins such as Myosin VI and is involved in Actin cytoskeleton organization and in ruffle formation. CALCOCO2 may also regulate cell adhesion, cytokine signaling and constitutive secretion within the cell, suggesting an important role in membrane trafficking pathways and developmental events.

CHROMOSOMAL LOCATION

Genetic locus: CALCOCO2 (human) mapping to 17q21.32.

SOURCE

CALCOCO2 (F-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 425-445 at the C-terminus of CALCOCO2 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.

CALCOCO2 (F-6) is available conjugated to agarose (sc-376540 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376540 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376540 PE), fluorescein (sc-376540 FITC), Alexa Fluor® 488 (sc-376540 AF488), Alexa Fluor® 546 (sc-376540 AF546), Alexa Fluor® 594 (sc-376540 AF594) or Alexa Fluor® 647 (sc-376540 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376540 AF680) or Alexa Fluor® 790 (sc-376540 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376540 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

CALCOCO2 (F-6) is recommended for detection of CALCOCO2 of human origin by Western Blotting (starting dilution 1:100, 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for CALCOCO2 siRNA (h): sc-93738, CALCOCO2 shRNA Plasmid (h): sc-93738-SH and CALCOCO2 shRNA (h) Lentiviral Particles: sc-93738-V.

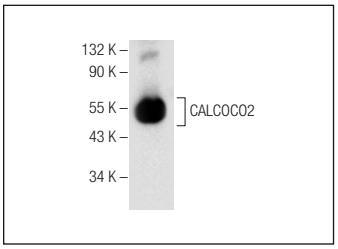
Molecular Weight of CALCOCO2: 55 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, Jurkat nuclear extract: sc-2132 or Ramos nuclear extract: sc-2153.

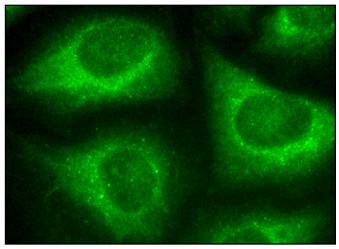
STORAGE

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

DATA



CALCOCO2 (F-6): sc-376540. Western blot analysis of CALCOCO2 expression in Ramos nuclear extract.



CALCOCO2 (F-6): sc-376540. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

SELECT PRODUCT CITATIONS

1. Chen, K., et al. 2018. Optineurin-mediated mitophagy protects renal tubular epithelial cells against accelerated senescence in diabetic nephropathy. Cell Death Dis. 9: 105.
2. Goiran, T., et al. 2018. Nuclear p53-mediated repression of autophagy involves PINK1 transcriptional down-regulation. Cell Death Differ. 25: 873-884.
3. Mohamud, Y., et al. 2019. CALCOCO2/NDP52 and SQSTM1/p62 differentially regulate coxsackievirus B3 propagation. Cell Death Differ. 26: 1062-1076.
4. Auer, D., et al. 2020. The chlamydial deubiquitinase Cdu1 supports recruitment of Golgi vesicles to the inclusion. Cell. Microbiol. 22: e13136.
5. Wang, K., et al. 2020. Blockage of autophagic flux and induction of mitochondria fragmentation by paroxetine hydrochloride in lung cancer cells promotes apoptosis via the ROS-MAPK pathway. Front. Cell Dev. Biol. 7: 397.
6. Franco-Iborra, S., et al. 2021. Mutant HTT (Huntingtin) impairs mitophagy in a cellular model of Huntington disease. Autophagy 17: 672-689.
7. Pablos, I., et al. 2021. Mechanistic insights into COVID-19 by global analysis of the SARS-CoV-2 $3CL^{pro}$ substrate degradome. Cell Rep. 37: 109892.
8. El Manaa, W., et al. 2021. Transcription- and phosphorylation-dependent control of a functional interplay between XBP1s and PINK1 governs mitophagy and potentially impacts Parkinson disease pathophysiology. Autophagy 17: 4363-4385.
9. Saha, B., et al. 2022. Interactomic analysis reveals a homeostatic role for the HIV restriction factor TRIM5α in mitophagy. Cell Rep. 39: 110797.

RESEARCH USE

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