SANTA CRUZ BIOTECHNOLOGY, INC.

Parkin (H-8): sc-136989

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Parkin is a zinc-finger protein that is related to ubiquitin at the amino terminus. The wild type Parkin gene, which maps to human chromosome 6q26, encodes a 465 amino acid full-length protein that is expressed as multiple isoforms. Mutations in the Parkin gene are responsible for autosomal recessive juvenile Parkinson's disease and commonly involve deletions of exons 3-5. In humans, Parkin is expressed in a subset of cells of the basal ganglia, midbrain, cerebellum and cerebral cortex, and is subject to alternative splicing in different tissues. Parkin expression is also high in the brainstem of mice, with the majority of immunopositive cells being neurons. The Parkin gene has been identified in a diverse group of organisms including mammals, birds, frog and fruit flies, suggesting that analogous functional roles of the Parkin protein may have been highly conserved during the course of evolution.

CHROMOSOMAL LOCATION

Genetic locus: PARK2 (human) mapping to 6q26.

SOURCE

Parkin (H-8) is a mouse monoclonal antibody raised against amino acids 61-360 mapping within an internal region of Parkin of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Parkin (H-8) is available conjugated to agarose (sc-136989 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-136989 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-136989 PE), fluorescein (sc-136989 FITC), Alexa Fluor® 488 (sc-136989 AF488), Alexa Fluor® 546 (sc-136989 AF546), Alexa Fluor® 594 (sc-136989 AF594) or Alexa Fluor® 647 (sc-136989 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-136989 AF680) or Alexa Fluor® 790 (sc-136989 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

Parkin (H-8) is recommended for detection of Parkin 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 Parkin siRNA (h): sc-42158, Parkin shRNA Plasmid (h): sc-42158-SH and Parkin shRNA (h) Lentiviral Particles: sc-42158-V.

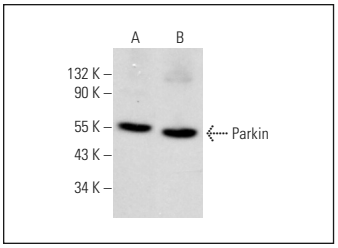
Molecular Weight of Parkin: 50-58 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270, IMR-32 cell lysate: sc-2409 or PC-3 cell lysate: sc-2220.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



Parkin (H-8): sc-136989. Western blot analysis of Parkin expression in PC-3 (**A**) and HEL 92.1.7 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Scuderi, S., et al. 2014. Alternative splicing generates different Parkin protein isoforms: evidences in human, rat, and mouse brain. Biomed Res. Int. 2014: 690796.
2. Zivanovic, J., et al. 2019. Selective persulfide detection reveals evolutionarily conserved antiaging effects of S-sulfhydration. Cell Metab. 30: 1152-1170.e13.
3. Sarkar, A., et al. 2021. Ataxia telangiectasia mutated interacts with Parkin and induces mitophagy independent of kinase activity. Evidence from mantle cell lymphoma. Haematologica 106: 495-512.
4. He, F., et al. 2021. Mitophagy-mediated adipose inflammation contributes to type 2 diabetes with hepatic Insulin resistance. J. Exp. Med. 218: e20201416.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.