

Dynactin p62 (H-4): sc-55603

BACKGROUND

Dynactin is a multisubunit complex and a required cofactor for most, if not all, of the cellular processes powered by the microtubule-based motor cytoplasmic Dynein. Dynactin contains a short Actin-related protein 1 (Arp1) filament with capZ at the barbed end and p62 at the pointed end. The p62 subunit is an integral component of 20 S Dynactin with a highly conserved cysteine-rich motif that interacts directly with Arp1. Dynactin p62 has a punctate cytoplasmic distribution as well as centrosomal distribution typical of Dynactin. In addition, Dynactin p62 is distributed in the nucleus at very high expression levels. Due to the structural composition of Dynactin, the p62 subunit is implicated in Arp1 pointed-end binding and in linking Dynein and Dynactin to the cortical cytoskeleton.

CHROMOSOMAL LOCATION

Genetic locus: DCTN4 (human) mapping to 5q33.1; Dctn4 (mouse) mapping to 18 D3.

SOURCE

Dynactin p62 (H-4) is a mouse monoclonal antibody raised against amino acids 161-460 of Dynactin p62 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.

Dynactin p62 (H-4) is available conjugated to agarose (sc-55603 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-55603 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-55603 PE), fluorescein (sc-55603 FITC), Alexa Fluor® 488 (sc-55603 AF488), Alexa Fluor® 546 (sc-55603 AF546), Alexa Fluor® 594 (sc-55603 AF594) or Alexa Fluor® 647 (sc-55603 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-55603 AF680) or Alexa Fluor® 790 (sc-55603 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

Dynactin p62 (H-4) is recommended for detection of Dynactin p62 of mouse, rat and 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), 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).

Suitable for use as control antibody for Dynactin p62 siRNA (h): sc-35232, Dynactin p62 siRNA (m): sc-35233, Dynactin p62 shRNA Plasmid (h): sc-35232-SH, Dynactin p62 shRNA Plasmid (m): sc-35233-SH, Dynactin p62 shRNA (h) Lentiviral Particles: sc-35232-V and Dynactin p62 shRNA (m) Lentiviral Particles: sc-35233-V.

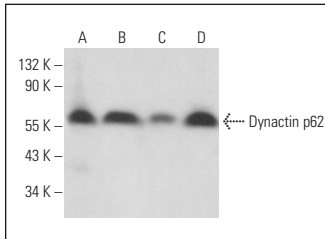
Molecular Weight of Dynactin p62: 62 kDa.

Positive Controls: Sol8 cell lysate: sc-2249, HeLa whole cell lysate: sc-2200 or K-562 whole cell lysate: sc-2203.

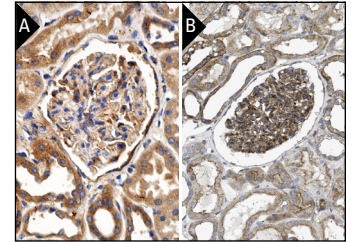
STORAGE

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

DATA



Dynactin p62 (H-4): sc-55603. Western blot analysis of Dynactin p62 expression in Sol8 (A), K-562 (B), HeLa (C) and SK-N-SH (D) whole cell lysates.



Dynactin p62 (H-4): sc-55603. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans and glandular cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human kidney tissue showing cytoplasmic staining of cells in glomeruli and tubules. Kindly provided by The Swedish Human Protein Atlas (HPA) program (B).

SELECT PRODUCT CITATIONS

- Cheema, M.U., et al. 2013. Aldosterone and Angiotensin II induce protein aggregation in renal proximal tubules. *Physiol. Rep.* 1: e00064.
- Cui, J., et al. 2015. Rapamycin protects against Gentamicin-induced acute kidney injury via autophagy in mini-pig models. *Sci. Rep.* 5: 11256.
- Zhang, Y., et al. 2017. Mcl-1 expression and JNK activation induces a threshold for apoptosis in Bcl-x_L-overexpressing hematopoietic cells. *Oncotarget* 8: 11042-11052.
- Duan, Y., et al. 2019. β-hydroxy β-methyl butyrate decreases muscle protein degradation via increased Akt/FoxO3a signaling and mitochondrial biogenesis in weanling piglets after lipopolysaccharide challenge. *Food Funct.* 10: 5152-5165.
- Cui, J., et al. 2019. N-acetylcysteine ameliorates Gentamicin-induced nephrotoxicity by enhancing autophagy and reducing oxidative damage in miniature pigs. *Shock* 52: 622-630.
- Zhang, Y.J., et al. 2020. NAD⁺ administration decreases microvascular damage following cardiac ischemia/reperfusion by restoring autophagic flux. *Basic Res. Cardiol.* 115: 57.
- Yang, Y., et al. 2021. PM2.5 exposure induces reproductive injury through IRE1/JNK/autophagy signaling in male rats. *Ecotoxicol. Environ. Saf.* 211: 111924.
- Fokin, A.I., et al. 2021. The Arp1/11 minifilament of dynactin primes the endosomal Arp2/3 complex. *Sci. Adv.* 7: eabd5956.

RESEARCH USE

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