α/β-centractin (A-7): sc-376010

BACKGROUND

The dynactin complex is a macromolecular complex that consists of 10-11 distinct subunits. This complex is critical for the function of dynein, a molecular motor protein. Dynactin plays a role in ER to Golgi transport, spindle formation, chromosome movement, axon guidance, nuclear positioning and the centripetal movement of lysosomes and endosomes. Centractin is a subunit of the dynactin complex that exists in multiple isoforms. The α isoform, also known as actin-related protein 1 homolog A (Arp1) and previously referred to as centractin, is the most abundant isoform in the dynactin complex. The two isoforms, α and β, are expressed at a ratio of 15:1 respectively. The backbone filament structure of the dynactin complex (important for the arrangement of other complex proteins) is composed of 9-11 subunits of α/β-centractin.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: ACTR1A (human) mapping to 10q24.32, ACTR1B (human) mapping to 2q11.2; Actr1a (mouse) mapping to 19 C3, Actr1b (mouse) mapping to 1 B.

SOURCE

α/β-centractin (A-7) is a mouse monoclonal antibody raised against amino acids 77-376 mapping at the C-terminus of α-centractin of human origin.

PRODUCT

Each vial contains 200 µg IgGκ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

α/β-centractin (A-7) is recommended for detection of α-centractin and β-centractin 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

α/β-centractin (A-7) is also recommended for detection of α-centractin and β-centractin in additional species, including equine, canine, bovine and porcine.

Molecular Weight of α-centractin: 43 kDa.
Molecular Weight of β-centractin: 42 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, KNRK whole cell lysate: sc-2214 or Neuro-2A whole cell lysate: sc-364185.

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, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2035 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-RTIC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Hard-set Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA

α/β-centractin (A-7): sc-376010. Western blot analysis of α/β-centractin expression in Caki-1 (A), KNRK (B), AMJ2-C8 (D) and EOC20 (E) whole cell lysates and human heart tissue extract (F).

STORAGE

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