

## Arp3 (1-110): sc-4661 WB

### BACKGROUND

Actin polymerization is required for a variety of cell functions, including chemotaxis, cell migration, cell adhesion, and platelet activation. Cells trigger actin polymerization through either the *de novo* nucleation of filaments from monomeric actin, the severing of existing filaments to create uncapped barbed ends, or the uncapping existing barbed ends. The nucleation of actin is a rate-limiting and unfavorable reaction in actin polymerization and therefore requires the involvement of the Arp2/3 complex, which helps create new filaments and promotes the end-to-side cross-linking of actin filaments into the branching meshwork. The Arp2/3 complex consists of the actin-related proteins Arp2 and Arp3, and various other accessory proteins. The Arp2/3 complex promotes actin nucleation by binding the pointed end of actin filaments, or by associating with the side of an existing filament, and nucleates growth in the barbed direction. In addition, the Arp2/3 complex also mediates actin cytoskeletal outgrowths that are regulated by the Rho family of small GTPases. In response to GTP-binding Cdc42, the Arp2/3 complex binds the Cdc42 substrates, namely the WASP proteins, and initiates the formation of lamellipodia and filopodia.

### REFERENCES

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### SOURCE

Arp3 (1-110) is expressed in *E. coli* as a 39 kDa tagged fusion protein corresponding to amino acids 1-110 of Arp3 of human origin.

### PRODUCT

Arp3 (1-110) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

### APPLICATIONS

Arp3 (1-110) is suitable as a Western blotting control for sc-10130 and sc-15390.

### STORAGE

Store at -20° C; stable for one year from the date of shipment.

### RESEARCH USE

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