Lamin A, also known as LMNA, is a 664 amino acid A-type nuclear lamin that is involved in nuclear stability, gene expression and chromatin structure. Alternate splicing events result in the expression of three isoforms of Lamin A, one of which is a truncated 614 amino acid protein known as Progerin (Lamin A\(\delta\)50). Progerin is created via a de novo silent point mutation in Lamin A and is the underlying cause of Hutchison-Gilford progeria syndrome (HGPS), a condition associated with rapidly accelerated aging characterized by cardiovascular disease and skeletal abnormalities. During interphase in normal cells, Progerin is anchored to the nuclear membrane, where it is thought to participate in mitotic events and may regulate standard aging processes. In cells affected with HGPS, however, Progerin mislocalizes into insoluble cytoplasmic aggregates and causes abnormal chromosome binucleation and segregation, thus creating the mitotic abnormality observed in HGPS.

**Genetic locus:** LMNA (human) mapping to 1q22; Nes (mouse) mapping to 3 F1.

**Source**

Progerin (13A4D4) is a mouse monoclonal antibody raised against amino acids 604-611 of Progerin of human origin.

**Product**

Each vial contains 200 µg IgG1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Progerin (13A4D4) is available conjugated to agarose (sc-81611 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-81611 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-81611 PE), fluorescein (sc-81611 FITC), Alexa Fluor® 488 (sc-81611 AF488), Alexa Fluor® 546 (sc-81611 AF546), Alexa Fluor® 594 (sc-81611 AF594) or Alexa Fluor® 647 (sc-81611 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-81611 AF680) or Alexa Fluor® 790 (sc-81611 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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**Storage**

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

**Applications**

Progerin (13A4D4) is recommended for detection of Progerin of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)]; non-cross-reactive with Lamin A or Lamin C.

Molecular Weight of Progerin: 70 kDa.

Positive Controls: PC-12 cell lysate; sc-2250.

**Recommended Support Reagents**

To ensure optimal results, the following support reagents are recommended:

1. Western Blotting: use m-IgG\(\kappa\)BP-HRP: sc-516102 or m-IgG\(\kappa\)BP-HRP (Cruz Marker); sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker\(\text{TM}\). 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-801A (0.5 ml agarose/2.0 ml).

**Select Product Citations**


**Research Use**

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