**BACKGROUND**

Overexpression of either Wnt-1 or the GLI proteins results in cancer; however, the molecular basis for this transformation was poorly understood. The Wnt-1 and GLI proteins have now been placed in a signaling cascade downstream of the mammalian homologs of the *Drosophila* hedgehog and patched proteins. The *Drosophila* segment polarity gene hedgehog (*hh*) encodes a secreted protein that appears to function in embryonic and imaginal disk patterning. The ptc gene, also identified as a *Drosophila* segment polarity gene, encodes the transmembrane protein patched, the expression of which is precisely regulated during embryonic development. Hedgehog has been shown to enhance the expression of the Wnt family of proteins through a signaling cascade involving the GLI transcription factors, while patched functions as a repressor opposing hedgehog's effects. Smoothened (Smo), a seven transmembrane receptor, is complexed with patched in many tissues and is believed to be an essential component in the Hh signaling pathway.

**CHROMOSOMAL LOCATION**

Genetic locus: SMO (human) mapping to 7q32.1; Smo (mouse) mapping to 6 A3.3.

**SOURCE**

Smo (E-5) is a mouse monoclonal antibody raised against amino acids 488-787 of Smo of human origin.

**PRODUCT**

Each vial contains 200 µg IgG₂κ light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Smo (E-5) is available conjugated to agarose (sc-166685 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-166685 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-166685 PE), fluorescein (sc-166685 FITC), Alexa Fluor® 488 (sc-166685 AF488), Alexa Fluor® 546 (sc-166685 AF546), Alexa Fluor® 594 (sc-166685 AF594) or Alexa Fluor® 647 (sc-166685 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-166685 AF680) or Alexa Fluor® 790 (sc-166685 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

In addition, Smo (E-5) is available conjugated to biotin (sc-166685 B), 200 µg/ml, for WB, IHC(P) and ELISA.

**APPLICATIONS**

Smo (E-5) is recommended for detection of Smo 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).

Suitable for use as control antibody for Smo siRNA (h): sc-40161, Smo siRNA (m): sc-40162, Smo shRNA Plasmid (h): sc-40161-SH, Smo shRNA Plasmid (m): sc-40162-SH, Smo shRNA (h) Lentiviral Particles: sc-40161-V and Smo shRNA (m) Lentiviral Particles: sc-40162-V.

Molecular Weight of Smo: 85 kDa.

**STORAGE**

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

**DATA**

![Western blot analysis of Smo expression in Hela (A), MIA PaCa-2 (B) and K-562 (C) whole cell lysates.](image)

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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

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