

#### DESCRIPTION

|                                                                                                                                                                                                         |                                                                                     |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <b>Species Reactivity</b>                                                                                                                                                                               | Human                                                                               |
| <b>Specificity</b>                                                                                                                                                                                      | Detects human SOS2 in Western blots.                                                |
| <b>Source</b>                                                                                                                                                                                           | Polyclonal Goat IgG                                                                 |
| <b>Purification</b>                                                                                                                                                                                     | Antigen Affinity-purified                                                           |
| <b>Immunogen</b>                                                                                                                                                                                        | <i>E. coli</i> -derived recombinant human SOS2<br>Met1-Ser384<br>Accession # Q07890 |
| <b>Conjugate</b>                                                                                                                                                                                        | Alexa Fluor 647<br>Excitation Wavelength: 650 nm<br>Emission Wavelength: 668 nm     |
| <b>Formulation</b>                                                                                                                                                                                      | Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide                        |
| *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions. |                                                                                     |

#### APPLICATIONS

**Please Note:** Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.

**Western Blot** Optimal dilution of this antibody should be experimentally determined.

#### PREPARATION AND STORAGE

|                                |                                                                                                                   |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------|
| <b>Shipping</b>                | The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below. |
| <b>Stability &amp; Storage</b> | Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied                          |

#### BACKGROUND

SOS2 (Son of sevenless homolog 2) is a 160-170 kDa protein that regulates Ras signaling. It is widely expressed, and serves as a mediator of guanine nucleotide phosphate exchange. In the resting cell, cytoplasmic SOS2 forms a heterodimer with Grb2, and a heterotrimer with Eps8 and E3b1. Upon RTK activation, the SOS heterodimer is recruited to the cell membrane, where it contacts GDP-bound Ras. This allows it to facilitate a GTP-for-GDP exchange that activates Ras. The heterotrimer interacts with Rac on actin filaments. SOS2 activity parallels that of SOS1. Relative to SOS1, however, SOS2 binds Grb2 with higher affinity and shows less biological activity due to a shorter half-life. Human SOS2 is 1332 amino acids (aa) in length and contains one histone fold (aa 97-169), PH (aa 439-546) and REM (aa 595-739) domains that interact with Ras, and a Pro-rich region that binds to Grb2 (aa 1126-1242).

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