

## DESCRIPTION

|                           |                                                                                                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Species Reactivity</b> | Human                                                                                                                                                                                                                                                                       |
| <b>Specificity</b>        | Detects human Nbs1 when phosphorylated at S343. Does not recognize Nbs1 when unphosphorylated at S343.                                                                                                                                                                      |
| <b>Source</b>             | Polyclonal Rabbit IgG                                                                                                                                                                                                                                                       |
| <b>Purification</b>       | Antigen Affinity-purified                                                                                                                                                                                                                                                   |
| <b>Immunogen</b>          | Phosphopeptide containing human Nbs1 S343 site                                                                                                                                                                                                                              |
| <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<br><br>*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

**Shipping** The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

**Stability & Storage** Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

## BACKGROUND

The Nijmegen Breakage Syndrome 1 (Nbs1) protein is a member of the Mre11/Rad50/Nbs1 (MRN) protein complex that binds to DNA double-strand breaks in cells exposed to DNA damaging agents. In addition, the MRN complex colocalizes with replication forks during DNA replication. The MRN complex plays an important role in routine cell cycle progression and genotoxic stress responses by facilitating DNA repair. Nbs1 is phosphorylated at S343 by ATM in response to double-strand breaks and by ATR under replication stress. This phosphorylation triggers the inactivation of late origin firing, which is essential for mediating the intra-S-phase checkpoint. Mutation of the *nbs1* gene and resultant loss of Nbs1 protein expression in humans results in the chromosomal instability disease, Nijmegen Breakage Syndrome.

## PRODUCT SPECIFIC NOTICES

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