

DESCRIPTION

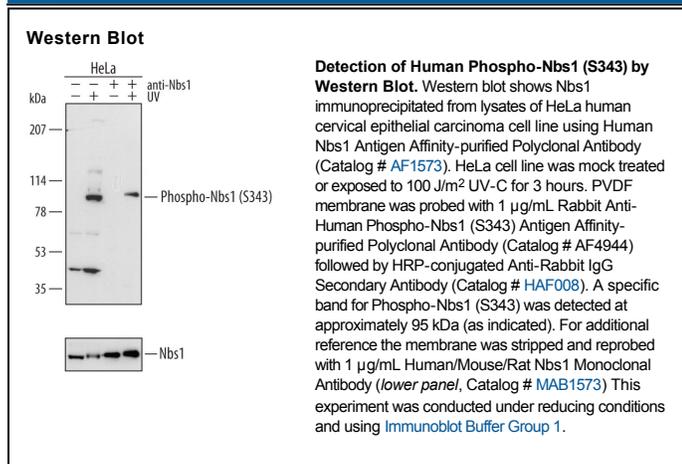
Species Reactivity	Human
Specificity	Detects human Nbs1 when phosphorylated at S343. Does not recognize Nbs1 when unphosphorylated at S343.
Source	Polyclonal Rabbit IgG
Purification	Antigen Affinity-purified
Immunogen	Phosphopeptide containing human Nbs1 S343 site
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS and Sodium Azide with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

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.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	See Below

DATA



PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

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.