

## Product Information

### Anti-DBP5 (N-terminal)

produced in rabbit, affinity isolated antibody

Product Number **D6444**

### Product Description

Anti-DBP5 (N-terminal) is produced in rabbit using as immunogen a synthetic peptide corresponding to a sequence at N-terminal of human DBP5 (Gene ID: 11269) conjugated to KLH. The corresponding sequence differs by three and four amino acids in mouse and rat, respectively. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-DBP5 (N-terminal) specifically recognizes human, rat, (predicted), and mouse (predicted) DBP5. The antibody may be used in several immunochemical techniques including immunoblotting (~53 kDa), immunoprecipitation, and immunofluorescence. Staining of the DBP5 band in immunoblotting is specifically inhibited with the immunizing peptide.

DBP5, also known as DDX19B, TF2H5, and General transcription factor IIH polypeptide 5, belongs to the family of the DEAD-box helicases that are found in all organisms including prokaryotes. These helicases function in many aspects of cellular RNA metabolism from transcription through pre-mRNA splicing, nuclear export, translation initiation to RNA degradation.<sup>1,2</sup> Members of this protein family are characterized by the presence of nine conserved amino-acids motifs that are involved in substrate binding and ATP hydrolysis. The name of the family was derived from the sequence D-E-A-D (Asp-Glu-Ala-Asp) of its Walker B motif.

DBP5 has been shown to be required for mRNA export from the nucleus in an ATP-dependent manner. It localizes within the cytoplasm and at the nuclear rim, where it interacts with components of the nuclear pore complex (NPC).<sup>3</sup> DBP5 shuttles between the nucleus and the cytoplasm by using Nup159 as a binding platform.<sup>4,5</sup> Recently it was shown that DBP5 is also involved in translation termination where it is required for efficient stop-codon recognition by controlling eRF1-eRF3 interaction.<sup>6</sup>

### Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody concentration: ~1.0 mg/mL

### Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

### Storage/Stability

For continuous use, store at 2–8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in “frost-free” freezers is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

### Product Profile

**Immunoblotting:** a working concentration of 1–2 µg/mL is recommended using HEK-293T cell lysate.

**Immunoprecipitation:** a working amount of 5–10 µL is recommended using HEK-293T cell lysate.

**Immunofluorescence:** a working concentration of 2.5–5 µg/mL is recommended using paraformaldehyde fixed HEK-293T cells overexpressing human DBP5.

**Note:** In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration

### References

1. Rocak, S., and Linder, P., *Nat. Rev. Mol. Cell Biol.*, **5**, 232-241 (2004).
2. Silverman, E. et al., *Gene*, **312**, 1-16 (2003).
3. Schmitt, C. et al., *EMBO J.*, **18**, 4332-4347 (1999).
4. Hodge, C.A. et al., *EMBO J.*, **18**, 5578 (1999).
5. Weirich, C.S. et al., *Mol. Cell*, **16**, 749-760 (2004).
6. Gross, T., et al. *Science*, **315**, 646-649 (2007).

VS,SG,KAA,PHC,MAM 01/19-1