

**NEK2, Active recombinant protein**  
**NEK, Serine/threonine-protein kinase Nek6**  
**Catalog # PBV11295r****Specification**

---

**NEK2, Active recombinant protein - Product info**

Primary Accession	<a href="#">P51955</a>
Concentration	<b>0.1</b>
Calculated MW	<b>76.0 kDa KDa</b>

**NEK2, Active recombinant protein - Additional Info**

Gene ID	<b>4751</b>
Gene Symbol	<b>NEK2</b>

**Other Names**

NEK, Serine/threonine-protein kinase Nek6, Serine/threonine-protein kinase Nek6, Never in mitosis A-related kinase 6, NimaA-related protein kinase 6, Protein kinase SID6-1512

Source	<b>Baculovirus (Sf9 insect cells)</b>
Assay&Purity	<b>SDS-PAGE; ≥90%</b>
Assay2&Purity2	<b>HPLC;</b>
Recombinant	<b>Yes</b>
<b>Format</b>	
Liquid	

**Storage**

-80°C; Recombinant proteins in storage buffer (50 mM Tris-HCl, pH 7.5, 150 mM NaCl, 0.25 mM DTT, 0.1 mM EGTA, 0.1 mM EDTA, 0.1 mM PMSF, 30% glycerol).

**NEK2, Active recombinant protein - Protocols**

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

**NEK2, Active recombinant protein - Images****NEK2, Active recombinant protein - Background**

Nek 2 is closely related in its catalytic domain to the serine/threonine protein kinase NIMA of *Aspergillus nidulans* that is required for entry into mitosis and may function in parallel to the universal mitotic inducer p34cdc2. Like NIMA, the Nek2 protein is almost undetectable during G1

but accumulated progressively throughout S, reaching maximal levels in late G2 (1). These observations demonstrate that Nek2 resembles *Aspergillus* NIMA, not only in its catalytic domain, but also in its cell cycle-dependent expression. Recombinant Nek2 is active as a serine/threonine-specific protein kinase and may undergo autophosphorylation. Both human Nek2 and fungal NIMA phosphorylate a similar, albeit not identical, set of proteins and synthetic peptides, and  $\beta$ -casein is a suitable substrate for assaying Nek2 in vitro (2). Nek2 is shown to be expressed most abundantly in the testis of the adult tissues examined (3). Its expression in the testis is restricted to the germ cells, with highest levels detected in spermatocytes at pachytene and diplotene stages. Immunohistochemical analysis revealed that Nek2 localized to nuclei, exhibiting a non-uniform distribution within the nucleus.

#### **NEK2, Active recombinant protein - References**

Schultz S.J., et al. *Cell Growth Differ.* 5:625-635(1994).  
Hames R.S., et al. *Biochem. J.* 361:77-85(2002).  
Lu K.P., et al. Submitted (JUL-1994) to the EMBL/GenBank/DDBJ databases.  
Kalnine N., et al. Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.  
Suzuki Y., et al. Submitted (APR-2005) to the EMBL/GenBank/DDBJ databases.