

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived mouse NPDC-1 protein		
	Mouse NPDC-1 (Ala32-Thr190, Thr33Leu) Accession # Q64322.2	IEGRMD	Human IgG ₁ Fc (Pro100-Lys330)
	N-terminus		C-terminus
N-terminal Sequence Analysis	Ala32 & Arg35		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	43 kDa		

SPECIFICATIONS

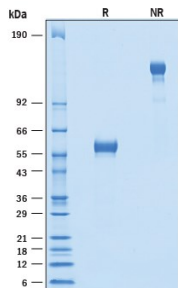
SDS-PAGE	54-62 kDa, under reducing conditions.
Activity	Bioassay data are not available.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 500 µg/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

DATA

SDS-PAGE



Recombinant Mouse NPDC-1 Fc Chimera Protein SDS-PAGE.
2 µg/lane of Recombinant Mouse NPDC-1 Fc Chimera Protein (Catalog # 10970-NP) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 54-62 kDa and 108-124 kDa, respectively.

BACKGROUND

Neural proliferation and differentiation control protein 1 (NPDC1) is an O-linked glycoprotein primarily expressed in lung and neural tissues and is involved in the regulation of cellular proliferation and differentiation (1,2). Mature NPDC1 consists of an extracellular domain (ECD) with a potential HLH-like domain, a transmembrane domain and a cytoplasmic domain containing a PEST motif (rich in proline, glutamine, serine, and threonine) which targets the protein for degradation (1). The ECD of mouse NPDC1 shares 76% and 92% amino acid sequence identity with human and rat NPDC1, respectively. NPDC1 expression is developmentally regulated and persists in the adult. NPDC1 binds a variety of cyclins and regulates differentiation events in neuronal precursor cells. It is expressed when neuronal precursor cells stop to divide and begin to differentiate (3). NPDC1 can interact with the transcription factor E2F-1, which results in the inhibition of E2F-1 binding to DNA and the corresponding transcription events (4). NPDC1 has been identified as a novel ligand for PILRα, binding through sialylation-dependent recognition (5).

References:

1. Spencer, M.L. *et al.* (2004) J. Biol. Chem. **279**:37069.
2. Evrard, C. and P. Rouget (2005) J. Neurosci. Res. **79**:747.
3. Galiana, E. *et al.* (1995) Proc. Natl. Acad. Sci. U.S.A. **92**:1560.
4. Sansal, I. *et al.* (2000) Oncogene **19**:5000.
5. Sun, Y. *et al.* (2012) J Biol Chem. **287**:15837.