

## Product datasheet for **TP317863L**

### **HNF 4 alpha (HNF4A) (NM\_000457) Human Recombinant Protein**

#### **Product data:**

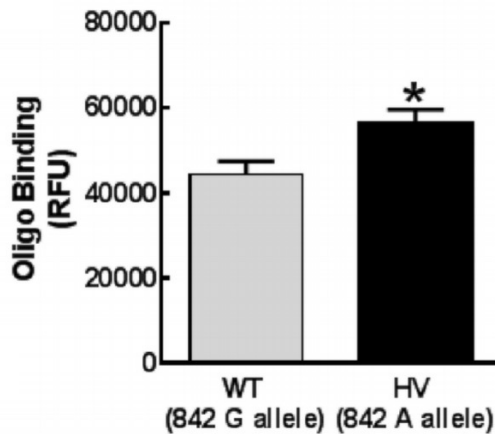
<b>Product Type:</b>	Recombinant Proteins
<b>Description:</b>	Recombinant protein of human hepatocyte nuclear factor 4, alpha (HNF4A), transcript variant 2, 1 mg
<b>Species:</b>	Human
<b>Expression Host:</b>	HEK293T
<b>Expression cDNA Clone or AA Sequence:</b>	>RC217863 representing NM_000457 <b>Red</b> =Cloning site <b>Green</b> =Tags(s)  MRLSKTLVDMDMADYSAALDPAYTTLEFENVQVLTMGNDTSPSEGTLNAPNSLGVLSALCAICGDRATGK HYGASSCDGCKGFFRRSVRKNHMYSCRFSRQCWVDKDKRNQCRYCRLKKCFRAGMKKEAVQNERDRISTR RSSYEDSSLPSINALLQAEVLSRQITSPVSGINGDIRAKKIASIADVCEMKEQLLVLEWAKYIPAFCE LPLDDQVALLRAHAGEHLLLGATKRSVMFKDVLVLLGNDYIVPRHCPELAEMSRVSIRILDELVLPFQELQ IDDNEYAYLKAIIFDPDAKGLSDPGKIKRLRSQVQSLEDYINDRQYDSRGRFGELLLLLPTLQSITWQ MIEQIQFIKLFGMKIDNLLQEMLLGGSPSDAPHAHHPLHPLMQEHMGTNVIVANTMPHLSNGQMCEW PRPRGQAATPETPQPSPGGSGSEPYKLLPGAVATIVKPLSAIPQPTITKQEV  <b>TRTRPLEQKLISEEDLAANDILDYKDDDDKV</b>
<b>Tag:</b>	C-Myc/DDK
<b>Predicted MW:</b>	52.6 kDa
<b>Concentration:</b>	>0.05 µg/µL as determined by microplate BCA method
<b>Purity:</b>	> 80% as determined by SDS-PAGE and Coomassie blue staining
<b>Buffer:</b>	25 mM Tris-HCl, 100 mM glycine, pH 7.3, 10% glycerol



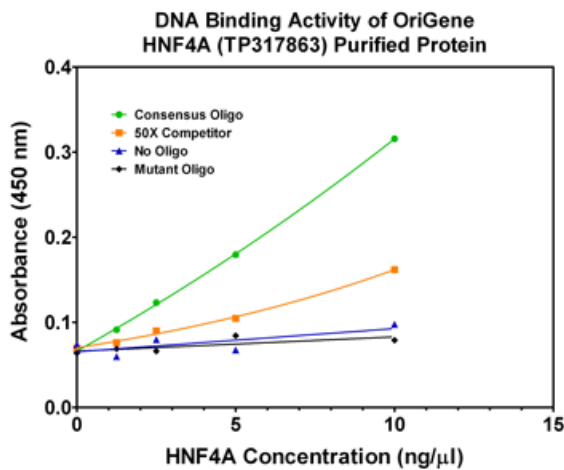
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<b>Bioactivity:</b>	<p>HNF4A Activity Verified in a DNA-binding Assay: HNF4A (TP317863, transcript variant 2) activity was measured in a colorimetric DNA-binding assay. Purified HNF4A protein containing a C-terminal MYC/DDK tag was incubated with biotinylated double-stranded oligonucleotide containing the HNF4A consensus DNA-binding sequence (see below). Following incubation, the reaction was transferred to a streptavidin-coated microplate to allow capture of the DNA-protein complex. After washing, the captured protein was detected with an anti-DDK peroxidase conjugate and colorimetric signal detection with TMB. Specificity of the protein-DNA interaction was confirmed by carrying out the binding in the presence of an unlabeled competitor oligonucleotide and by comparison to binding to an oligonucleotide containing a mutation in the consensus binding sequence.</p> <p>EMSA assay (PMID: <a href="#">25598084</a>) Binding assay (PMID: <a href="#">29642240</a>)</p>
<b>Preparation:</b>	<p>Recombinant protein was captured through anti-DDK affinity column followed by conventional chromatography steps.</p>
<b>Note:</b>	<p>For testing in cell culture applications, please filter before use. Note that you may experience some loss of protein during the filtration process.</p>
<b>Storage:</b>	<p>Store at -80°C.</p>
<b>Stability:</b>	<p>Stable for 12 months from the date of receipt of the product under proper storage and handling conditions. Avoid repeated freeze-thaw cycles.</p>
<b>RefSeq:</b>	<p><a href="#">NP_000448</a></p>
<b>Locus ID:</b>	<p>3172</p>
<b>UniProt ID:</b>	<p><a href="#">P41235</a>, <a href="#">F1D8T1</a></p>
<b>RefSeq Size:</b>	<p>4737</p>
<b>Cytogenetics:</b>	<p>20q13.12</p>
<b>RefSeq ORF:</b>	<p>1422</p>
<b>Synonyms:</b>	<p>FRTS4; HNF4; HNF4a7; HNF4a8; HNF4a9; HNF4alpha; MODY; MODY1; NR2A1; NR2A21; TCF; TCF-14; TCF14</p>
<b>Summary:</b>	<p>The protein encoded by this gene is a nuclear transcription factor which binds DNA as a homodimer. The encoded protein controls the expression of several genes, including hepatocyte nuclear factor 1 alpha, a transcription factor which regulates the expression of several hepatic genes. This gene may play a role in development of the liver, kidney, and intestines. Mutations in this gene have been associated with monogenic autosomal dominant non-insulin-dependent diabetes mellitus type I. Alternative splicing of this gene results in multiple transcript variants encoding several different isoforms. [provided by RefSeq, Apr 2012]</p>
<b>Protein Families:</b>	<p>Druggable Genome, ES Cell Differentiation/IPS, Nuclear Hormone Receptor, Transcription Factors</p>
<b>Protein Pathways:</b>	<p>Maturity onset diabetes of the young</p>

Product images:



In vitro oligonucleotide binding assay. C-myc-tagged HNF4A protein (OriGene [TP317863]) was added to a solution of double-stranded oligonucleotides labeled with biotin. Oligonucleotides consisted of DNA sequences of wild-type (WT) or HV SLC4A5 alleles. After incubation for 30 min, streptavidin Alexa Fluor 647 was added to label the oligonucleotides; anti-c-Myc antibody was then added, followed by magnetic protein A/G to capture HNF4A-oligonucleotide complexes. The samples were washed and read on a microplate reader. HNF4A binding is increased in HV relative to WT sequence. Figure cited from PLoS ONE, PMID: 29642240



Coomassie blue staining of purified HNF4A protein (Cat# [TP317863]). The protein was produced from HEK293T cells transfected with HNF4A cDNA clone (Cat# [RC217863]) using MegaTran 2.0 (Cat# [TT210002]).