# Description

<table>
<thead>
<tr>
<th>Product name</th>
<th>VEGFA peptide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animal free</td>
<td>No</td>
</tr>
<tr>
<td>Nature</td>
<td>Synthetic</td>
</tr>
<tr>
<td>Species</td>
<td>Human</td>
</tr>
<tr>
<td>Description</td>
<td>Human VEGFA peptide</td>
</tr>
</tbody>
</table>

## Specifications

Our Abpromise guarantee covers the use of **ab46160** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

### Applications

- **Blocking** - Blocking peptide for Anti-VEGFA antibody (**ab46154**)

### Form

- Liquid

### Additional notes

- **First try to dissolve** a small amount of peptide **in either water or buffer**. The more charged residues on a peptide, the more soluble it is in aqueous solutions.
- **If the peptide doesn’t dissolve** try an organic solvent e.g. DMSO, then dilute using water or buffer.
- Consider that any solvent used must be compatible with your assay. If a peptide does not dissolve and you need to recover it, **lyophilise to remove the solvent**.
- Gentle warming and sonication can effectively aid peptide solubilisation. If the solution is cloudy or has gelled the peptide may be in suspension rather than solubilised.
- Peptides containing cysteine are easily oxidised, so should be prepared in solution just prior to use.

## Preparation and Storage

### Stability and Storage

Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

Information available upon request.
**Function**
Growth factor active in angiogenesis, vasculogenesis and endothelial cell growth. Induces endothelial cell proliferation, promotes cell migration, inhibits apoptosis and induces permeabilization of blood vessels. Binds to the FLT1/VEGFR1 and KDR/VEGFR2 receptors, heparan sulfate and heparin. NRP1/Neuropilin-1 binds isoforms VEGF-165 and VEGF-145. Isoform VEGF165B binds to KDR but does not activate downstream signaling pathways, does not activate angiogenesis and inhibits tumor growth.

**Tissue specificity**
Isoform VEGF189, isoform VEGF165 and isoform VEGF121 are widely expressed. Isoform VEGF206 and isoform VEGF145 are not widely expressed.

**Involvement in disease**
Defects in VEGFA are a cause of susceptibility to microvascular complications of diabetes type 1 (MVCD1) [MIM:603933]. These are pathological conditions that develop in numerous tissues and organs as a consequence of diabetes mellitus. They include diabetic retinopathy, diabetic nephropathy leading to end-stage renal disease, and diabetic neuropathy. Diabetic retinopathy remains the major cause of new-onset blindness among diabetic adults. It is characterized by vascular permeability and increased tissue ischemia and angiogenesis.

**Sequence similarities**
Belongs to the PDGF/VEGF growth factor family.

**Cellular localization**
Secreted. VEGF121 is acidic and freely secreted. VEGF165 is more basic, has heparin-binding properties and, although a significant proportion remains cell-associated, most is freely secreted. VEGF189 is very basic, it is cell-associated after secretion and is bound avidly by heparin and the extracellular matrix, although it may be released as a soluble form by heparin, heparinase or plasmin.

**Images**

![Western blot - VEGFA peptide (ab46160)](image)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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- We investigate all quality concerns to ensure our products perform to the highest standards

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