**Product datasheet**

**Anti-IGF2 antibody ab9574**

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**Overview**

- **Product name**: Anti-IGF2 antibody
- **Description**: Rabbit polyclonal to IGF2
- **Host species**: Rabbit
- **Tested applications**: Suitable for: WB, ELISA, Neutralising, ICC/IF, IHC-P
- **Species reactivity**: Reacts with: Rat, Cow, Human
- **Immunogen**: Highly pure (>98%) recombinant hIGF-2 (human Insulin Like Growth Factor-2).
- **Positive control**: ab9575 (Active IGF2 full length protein) can be used as a positive control.
- **General notes**: Insulin Like Growth Factor-2 (IGF-2) is a polypeptide growth factor, which stimulates the proliferation of a wide range of cell types

**Properties**

- **Form**: Lyophilised: Reconstitute with 200µl of sterile water. The reconstituted antibody is stable for at least 2 weeks at 2-8°C and at least 6 months at -20°C
- **Storage instructions**: Shipped at 4°C. Store at -20°C.
- **Storage buffer**: PBS, pH 7.4, no preservative, sterile filtered
- **Purity**: Immunogen affinity purified
- **Primary antibody notes**: Insulin Like Growth Factor-2 (IGF-2) is a polypeptide growth factor, which stimulates the proliferation of a wide range of cell types
- **Clonality**: Polyclonal
- **Isotype**: IgG
- **Light chain type**: unknown

**Applications**

Our Abpromise guarantee covers the use of ab9574 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.
**Function**

The insulin-like growth factors possess growth-promoting activity. In vitro, they are potent mitogens for cultured cells. IGF-II is influenced by placental lactogen and may play a role in fetal development.

Preptin undergoes glucose-mediated co-secretion with insulin, and acts as physiological amplifier of glucose-mediated insulin secretion. Exhibits osteogenic properties by increasing osteoblast mitogenic activity through phosphoactivation of MAPK1 and MAPK3.

**Involvement in disease**

Epigenetic changes of DNA hypomethylation in IGF2 are a cause of Silver-Russell syndrome (SIRS) [MIM:180860]. SIRS is a clinically heterogeneous condition characterized by severe intrauterine growth retardation, poor postnatal growth, craniofacial features such as a triangular shaped face and a broad forehead, body asymmetry, and a variety of minor malformations.

**Sequence similarities**

Belongs to the insulin family.

**Post-translational modifications**

O-glycosylated with a core 1 or possibly core 8 glycan.

**Cellular localization**

Secreted.

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**Application**

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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<tbody>
<tr>
<td>WB</td>
<td><img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /></td>
<td>Use at an assay dependent concentration. To detect hIGF-2 by Western Blot analysis this antibody can be used at a concentration of 0.1 - 0.2 µg/ml. Used in conjunction with compatible secondary reagents the detection limit for recombinant hIGF-2 is 1.5 - 3.0 ng/lane, under either reducing or non-reducing conditions.</td>
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<td>ELISA</td>
<td><img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /></td>
<td>Use at an assay dependent concentration. To detect hIGF-2 by ELISA (using 100µl/well antibody solution) a concentration of at least 0.5µg/ml of this antibody is required. This antigen affinity purified antibody, in conjunction with compatible secondary reagents, allows the detection of 0.2 - 0.4 ng/well of recombinant hIGF-2.</td>
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<td>Neutralising</td>
<td><img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /></td>
<td>Use at an assay dependent concentration. To yield one-half maximal inhibition of the biological activity of hIGF-2 (10.0 ng/ml), a concentration of 3.1 - 4.6 µg/ml of this antibody is required.</td>
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<tr>
<td>ICC/IF</td>
<td><img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /></td>
<td>Use a concentration of 1 - 5 µg/ml.</td>
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<td>IHC-P</td>
<td><img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /> <img src="/rating.png" alt="Rating" /></td>
<td>Use at an assay dependent concentration.</td>
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</tbody>
</table>

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**Target**

**Function**

The insulin-like growth factors possess growth-promoting activity. In vitro, they are potent mitogens for cultured cells. IGF-II is influenced by placental lactogen and may play a role in fetal development.

Preptin undergoes glucose-mediated co-secretion with insulin, and acts as physiological amplifier of glucose-mediated insulin secretion. Exhibits osteogenic properties by increasing osteoblast mitogenic activity through phosphoactivation of MAPK1 and MAPK3.

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**Images**
Immunohistochemical analysis of parafin embedded rat kidney tissue labelling IGF2 with ab9574 at 1µg/ml.

Anti-IGF2 antibody (ab9574) at 1/2000 dilution + whole tissue lysate prepared from murine liver at 40 µg

**Secondary**

HRP conjugated goat anti-rabbit polyclonal at 1/4000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Observed band size:** 20 kDa

**Exposure time:** 2 minutes
ICC/IF image of ab9574 stained HepG2 cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab9574, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

Western blot - IGF2 antibody (ab9574)
Rabbit Anti-Human IGF-II against Human IGF-II. Antibody concentration: 0.10 ug/ml Lower limit of detection: 3.91 ng/lane Molecular Weight: 7.5 kDa
Lane 1: Marker
Lane 2: 250 ng
Lane 3: 125 ng
Lane 4: 62.5 ng
Lane 5: 31.25 ng
Lane 6: 15.625 ng
Lane 7: 7.8 ng
Lane 8: 3.9 ng
**Immunohistochemistry (Frozen sections) - IGF2 antibody (ab9574)**

This image is courtesy of an anonymous Abreview.

ab9574 staining human tongue carcinoma tissue sections by IHC-P. For antigen retrieval sections were placed in a bath of 0.01M citric acid, pH6, and were heated on full power in a microwave for 5 minutes and then for a further 4 minutes. The slides were then cooled and placed in PBS, fixed with paraformaldehyde and blocked with BSA. The slides were incubated with the antibody for 18 hours. An HRP conjugated pig polyclonal antibody was used as the secondary.

**Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - IGF2 antibody (ab9574)**

IHC-P of normal human placenta stained with ab9574. The recommended concentration ranges from 0.5 µg/ml-5.0 µg/ml. An HRP-labeled polymer detection system was used with DAB chromogen. Recommended antigen retrievals are heat induced antigen retrieval with a pH 6.0 Sodium Citrate buffer or enzyme induced antigen retrieval with Proteinase K. Optimal concentrations and conditions may vary.

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