abcam

ab20162

# Anti-ErbB3 / HER3 antibody [SGP1]

## Key facts

| | |
|---|---|
| **Isotype** | IgG1 |
| **Host species** | Mouse |
| **Storage buffer** | Preservative: 0.02% Sodium azide Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | Recombinant Full Length Protein corresponding to Human ERBB3. Database link P21860 |
| **Clone number** | SGP1 |
| **Purification technique** | Affinity purification Protein A/G |
| **Epitope** | Extracellular domain. |
| **Light chain type** | kappa |
| **Concentration** | 1 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

## IP

### Expected

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|---|---|
| **Species** | Human |
| **Dilution info** | Use at an assay dependent concentration. |

| | |
|---|---|
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Chimpanzee |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt

### Expected

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody. |

### Predicted

| | |
|---|---|
| **Species** | Chimpanzee |
| **Dilution info** | - |
| **Notes** | - |

## Target data

See full target information ERBB3

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|---|---|
| **Function** | Tyrosine-protein kinase that plays an essential role as cell surface receptor for neuregulins. Binds to neuregulin-1 (NRG1) and is activated by it; ligand-binding increases phosphorylation on tyrosine residues and promotes its association with the p85 subunit of phosphatidylinositol 3-kinase (PubMed:20682778). May also be activated by CSPG5 (PubMed:15358134). Involved in the regulation of myeloid cell differentiation (PubMed:27416908). |

## Storage

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|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage duration** | 1-2 weeks |

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|---|---|
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | -20°C |
| **Storage information** | Avoid freeze / thaw cycle |

## Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

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|---|---|
| **Activity summary** | The ErbB3 protein also known as HER3 is a member of the epidermal growth factor receptor (EGFR) family. It belongs to the ErbB receptor tyrosine kinase family but lacks intrinsic kinase activity. The HER3 protein has a molecular weight of approximately 180 kDa. You will find HER3 expressed in various tissues with high expression in the epithelial tissues where it plays a role in normal cellular processes. HER3 interacts with multiple ligands facilitating cellular communication and growth regulation. |
| **Biological function summary** | HER3 is essential for activating important signaling pathways that regulate proliferation differentiation and survival. The ErbB3 protein forms heterodimers with other ErbB family members such as ErbB2 (HER2) which is necessary for its signaling capability. The HER3 protein is abundant in heart and nervous tissues indicating its role in cardiovascular and neurological functions. Its activation modulates gene expression through downstream effectors mediated by dimerization. |
| **Pathways** | HER3 plays a pivotal role in the PI3K/Akt and MAPK signaling pathways. These pathways are fundamental in cellular responses like growth and survival. HER3 serves as a major partner for HER2 in these signaling cascades enhancing downstream signaling effects. HER3's connection to these pathways makes it a critical node collaborating closely with proteins such as HER2 and EGFR to maintain efficient communication and function within these networks. |
| **Associated diseases and disorders** | HER3 associates strongly with cancer and cardiovascular diseases. Its overexpression in certain cancers such as breast cancer leads to enhanced tumor growth and resistance to therapy. HER3’s relationship with the HER2 protein is especially significant in HER2-positive breast cancer where their interaction drives tumor progression. Additionally alterations in HER3 expression or function impact cardiovascular diseases as it plays a significant role in heart and vascular cell behavior. Recognizing HER3's involvement in these conditions allows for targeted therapeutic approaches and improves disease management strategies. |

## Product promise

**Tested**

We have tested this species and application combination and it works. It is covered by our product promise.

**Expected**

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

**Predicted**

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

**Not recommended**

We do not recommend this combination. It is not covered by our product promise.

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