**EGF Receptor (D38B1) XP® Rabbit mAb**

**Applications:** WB, W-S, IP, IHC-Bond, IHC-P, IF-IC, FC-FP

**Reactivity:** H M Mk

**Sensitivity:** Endogenous

**MW (kDa):** 175

**Source/Isotype:** Rabbit IgG

**UniProt ID:** #P00533

**Entrez-Gene Id:** 1956

**Product Usage Information**

<table>
<thead>
<tr>
<th>Application</th>
<th>Dilution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Blotting</td>
<td>1:1000</td>
</tr>
<tr>
<td>Simple Western™</td>
<td>1:10 - 1:50</td>
</tr>
<tr>
<td>Immunoprecipitation</td>
<td>1:100</td>
</tr>
<tr>
<td>IHC Leica Bond</td>
<td>1:50</td>
</tr>
<tr>
<td>Immunohistochemistry (Paraffin)</td>
<td>1:50</td>
</tr>
<tr>
<td>Immunofluorescence (Immunocytochemistry)</td>
<td>1:50 - 1:200</td>
</tr>
<tr>
<td>Flow Cytometry (Fixed/Permeabilized)</td>
<td>1:50 - 1:200</td>
</tr>
</tbody>
</table>

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at −20°C. Do not aliquot the antibody.

For a carrier-free (BSA and azide free) version of this product see product #26038.

**Specificity / Sensitivity**

EGF Receptor (D38B1) XP® Rabbit mAb detects endogenous levels of total EGF receptor protein. The antibody does not cross-react with other proteins of the ErbB family. Species cross-reactivity for IHC-P, IHC-BOND, and IF-IC is human only.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a fusion protein containing the cytoplasmic domain of human EGF receptor.

**Background**

The epidermal growth factor (EGF) receptor is a transmembrane tyrosine kinase that belongs to the HER/ErbB protein family. Ligand binding results in receptor dimerization, autophosphorylation, activation of downstream signaling, internalization, and lysosomal degradation (1,2). Phosphorylation of EGF receptor (EGFR) at Tyr845 in the kinase domain is implicated in stabilizing the activation loop, maintaining the active state enzyme, and providing a binding surface for substrate proteins (3,4). c-Src is involved in phosphorylation of EGFR at Tyr845 (5). The SH2 domain of PLCγ binds at phospho-Tyr992, resulting in activation of PLCγ-mediated downstream signaling (6). Phosphorylation of EGFR at Tyr1045 creates a major docking site for the adaptor protein c-Cbl, leading to receptor ubiquitination and degradation following EGFR activation (7,8). The GRB2 adaptor protein binds activated EGFR at phospho-Tyr1068 (9). A pair of phosphorylated EGFR residues (Tyr1148 and Tyr1173) provide a docking site for the Shc scaffold protein, with both sites involved in MAP kinase signaling activation (2). Phosphorylation of EGFR at specific serine and threonine residues attenuates EGFR kinase activity, EGFR carboxy-terminal residues Ser1046 and Ser1047 are phosphorylated by CaM kinase II; mutation of either of these serines results in upregulated EGFR tyrosine autophosphorylation (10).

**Background References**


**Species Reactivity**

https://www.cellsignal.com/datasheet.jsp?productid=4267&images=0&protocol=0
Species reactivity is determined by testing in at least one approved application (e.g., western blot).

### Western Blot Buffer

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

### Applications Key

- **WB:** Western Blotting
- **W-S:** Simple Western™
- **IP:** Immunoprecipitation
- **IHC-Bond:** IHC Leica Bond
- **IHC-P:** Immunohistochemistry (Paraffin)
- **IF-IC:** Immunofluorescence (Immunocytochemistry)
- **FC-FP:** Flow Cytometry (Fixed/Permeabilized)

### Cross-Reactivity Key

- **H:** human
- **M:** mouse
- **R:** rat
- **Hm:** hamster
- **Mk:** monkey
- **Vir:** virus
- **C:** chicken
- **Dm:** D. melanogaster
- **X:** Xenopus
- **Z:** zebrafish
- **B:** bovine
- **Pg:** pig
- **Sc:** S. cerevisiae
- **Ce:** C. elegans
- **Hr:** horse
- **GP:** Guinea Pig
- **Rab:** rabbit
- **All:** all species expected

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