

## Monoclonal Antibody to Human CD221- PE

<b>Alternate names:</b>	IGF-I receptor, IGF1 Receptor, Insulin-like growth factor 1 receptor
<b>Catalog No.:</b>	BM2226R
<b>Quantity:</b>	100 Tests
<b>Concentration:</b>	0.1 mg/ml
<b>Background:</b>	<p>There are two kinds of IGF receptors based on their relative affinities for IGF1 versus IGF2. The IGF1 receptor prefers IGF1 over IGF2 and weakly binds insulin. IGF1 receptor is a disulfide-linked heterotetrameric transmembrane protein consisting of two alpha (130 kD) and two beta (95 kD) subunits. Both the alpha and beta subunits are encoded within a single receptor precursor cDNA. The IGF1 receptor is therefore similar in structure to the insulin receptor. The proreceptor polypeptide is proteolytically cleaved and disulfide-linked to yield the mature heterotetrameric receptor. The IGF1 receptor is highly expressed in all cell types and tissues and is highly overexpressed in most malignant tissues where it functions as an anti-apoptotic agent by enhancing cell survival.</p>
<b>Uniprot ID:</b>	<a href="#">P08069</a>
<b>NCBI:</b>	<a href="#">NP_000866.1</a>
<b>GeneID:</b>	<a href="#">3480</a>
<b>Host / Isotype:</b>	Mouse / IgG1
<b>Clone:</b>	1H7
<b>Format:</b>	<p><b>State:</b> Lyophilized Ig fraction <b>Purification:</b> Affinity chromatography on Protein G <b>Buffer System:</b> Phosphate buffered saline pH 7.4 containing 0.09% Sodium Azide, 1% Bovine Serum Albumin <b>Label:</b> PE – Conjugated to R. Phycoerythrin (RPE) <b>Reconstitution:</b> Reconstitute with 1 ml distilled water</p>
<b>Applications:</b>	<p>Flow cytometry: use 10 µl of neat antibody to label 10e6 cells in 100 µl. Other applications not tested. Optimal dilutions are dependent on conditions and should be determined by the user.</p>
<b>Specificity:</b>	<p>BM2226R recognises human CD221, a 155kD receptor tyrosine kinase, also known as Insulin-like growth factor I receptor (IGF-I Receptor). CD221 is composed of two extracellular alpha-subunits and two transmembrane beta-subunits. Clone 1H7 recognises an epitope in the alpha subunits of CD221, demonstrated by Western blotting (1). CD221 is expressed in a range of tissues, including kidney, liver, placenta, mammary gland, brain, ovary and skin. The ligands for CD221 include IGF-I and IGF-II, which bind to CD221 and activate tyrosine kinase activity, resulting in phosphorylation of several intracellular signalling proteins. Clone 1H7 is reported to partially block binding of IGF-I and IGF-II to CD221 (1). We</p>

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recommend the use of BM2226LE for this purpose.

**Species Reactivity:** **Tested:** Human

**Storage:** Prior and following reconstitution store at +4 °C. Do not freeze! This product is photosensitive and should be protected from light.  
Shelf life: one year from despatch.

**Product Citation:** Unconjugated antibody is cited in:  
1. Constanze Hantel, Felicitas Lewrick, Sebastian Schneider, Oliver Zwermann, Aurel Perren, Martin Reincke, Regine Süß, and Felix Beuschlein Anti Insulin-Like Growth Factor I Receptor Immunoliposomes: A Single Formulation Combining Two Anticancer Treatments with Enhanced Therapeutic Efficiency. J. Clin. Endocrinol. Metab., Feb 2010; 95: 943-952.

**General References:** 1. Li, S.L. et al. (1993) Two new monoclonal antibodies against the alpha subunit of the human insulinlike growth factorI receptor.

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