

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human plgR in ELISAs.
Source	Monoclonal Mouse IgG ₁ Clone # 825732
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human plgR Lys19-Arg638 Accession # P01833
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS and NaCl with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

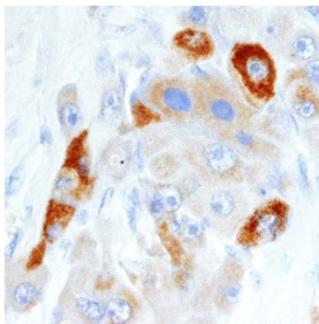
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Immunohistochemistry	8-25 µg/mL	See Below

DATA

Immunohistochemistry



plgR in Human Liver Cancer Tissue. plgR was detected in formalin fixed paraffin-embedded sections of human liver cancer tissue using Mouse Anti-Human plgR Monoclonal Antibody (Catalog # MAB27171) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Mouse HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS002) and counterstained with hematoxylin (blue). Specific staining was localized in the cytoplasm. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

The human polymeric immunoglobulin receptor (pIgR; also known as membrane secretory component) is a 100 kDa type I transmembrane glycoprotein that is synthesized as a 764 amino acid (aa) precursor. It includes a signal sequence (aa 1-18), an extracellular region (aa 19-638), a transmembrane segment (aa 639-661), and a cytoplasmic domain (aa 662-764) (1-3). The extracellular region consists of five Ig-like domains and a sixth non-Ig domain that connects to the membrane region. pIgR is expressed on secretory epithelial cells of exocrine tissues. Immunoglobulin isotypes consist of two heavy (H) and two light (L) chains. For IgA and IgM, this H₂L₂ monomer can form larger polymers through association with a joining chain (J chain). The Fc regions of IgA and IgM have a carboxy-terminal extension called a secretory tailpiece that binds the J chain (4). pIgR functions as a carrier that transports IgA and IgM across epithelium (5). On the basolateral surface of epithelial cells, the receptor initially binds non-covalently to IgA via a docking site on the J chain. This initiates a rearrangement in which a disulfide bond forms between pIgR and an IgA heavy chain (2). The complexes are then internalized and transcytosed to the apical surface. A soluble covalent complex called secretory IgA (SIgA) is now generated by proteolytic cleavage of the sixth extracellular domain of pIgR and released into the lumen (6). This IgA-bound and proteolytically generated pIgR fragment is referred to as secretory component (SC). Notably, human pIgR transcytoses constitutively, with or without ligand, creating both bound and free, 78 kDa SC following cleavage (3). The extracellular region of pIgR is 64%, 65%, and 70% aa identical to the equivalent region in rat, mouse and porcine, respectively. The receptor component of the complex anchors the SIgA molecule to mucous (7). SIgA is a crucial component of the mucosal immune system serving to protect the large expanse of mucous membranes that form a barrier between the interior of the body and the external environment (8).

References:

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4. Braathen, R. *et al.* (2002) *J. Biol. Chem.* **277**:42755.
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6. Asano, M. *et al.* (2004) *Immunology* **112**:583.
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