Anti-Parathyroid Hormone-related Protein [HuMBC1] Bulk Size Ab00796-23.0-BT

This chimeric rabbit antibody was made using the variable domain sequences of the original Human IgG1 format, for improved compatibility with existing reagents, assays and techniques.

Isotype and Format: Rabbit IgG, Lambda
Clone Number: HuMBC1
Alternative Name(s) of Target: hu-q
UniProt Accession Number of Target Protein:
Published Application(s): neutralize, ELISA
Published Species Reactivity: Human
Immunogen: The anti-PTHrP antibody was prepared by immunizing mice with synthetic bovine thyroglobulin-conjugated PTHrP (aa 1-34) and generating the hybridoma cell line #23-57-137-1. The CRD regions of the variable region of the heavy chain was grafted onto the human framework regions of the human antibody S31679, and for the light chain FR1, FR2 and FR3 were grafted to that of HSU03868 and FR4 of the mouse antibody was grafted to that of S31679.
Specificity: HuMBC1 binds to human PTHrPat an epitope between residues 20 and 30(KD ~ 0.2 nM), a site closely overlapping with the GPCR parathyroid hormone receptor 1 (PTH1R) binding site. The antibody does not bind to PTH at concentrations of 10ug/ml. PTHrP is known to be a causative factor of humoural hypercalcemia of malignancy (HHM), which is frequently found at advanced stages of cancer. The protein binds to PTHR1, which is expressed on the surface of cells of the osteoblast lineage and of the kidney tubule; this interaction actively promotes bone resorption, in a manner identical to that of PTH.
Application Notes: HuMBC1 can almost completely blocks the PTHrP-induced cAMP production in rat osteosarcoma cells that expressed PTHR1, even in the presence of 2 g/mL PTHrP(1-34) – the neutralizing activity in the humanized antibody is equilavent to that of the murine antibody from which it is derived (#23-57-137-1). The humanized antibody is also effective in reducing the blood ionized calcium levels of hypercalcemic mice bearing the PAN-7-JCK human pancreatic cancer xenograft or the LC-6-JCK human lung cancer xenograft that secreted PTHrP. PTH binding and activity is not neutralized by this antibody. The antibody can also be used to detect the presence of and binding of PTHrP by EILSA.
Antibody First Published in: Onuma et al. Generation of a Humanized Monoclonal Antibody Against Human Parathyroid Hormone-related Protein and its Efficacy Against Humoral Hypercalcemia of Malignancy

© 2024 Absolute Antibody Wilton, UK.

Anticancer Res. 2004 Sep-Oct;24(5A):2665-73. PMID:15517871
Note on publication: Describes the generation of a humanized anti-hPTHrP mAb. Its effects in vivo and in vitro were studied.

Product Form

Size: 1 mg Purified antibody in bulk size.
Purification: Protein A affinity purified
Supplied In: PBS only.
Storage Recommendation: Store at 4ºC for up to 3 months. Note, this antibody is provided without added preservatives, it is therefore recommed this antibody be handled under sterile conditions. For longer storage, aliquot and store at -20ºC.
Concentration: 1 mg/ml.

Important note – This product is for research use only. It is not intended for use in therapeutic or diagnostic procedures for humans or animals.

© 2024 Absolute Antibody Wilton, UK.