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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Anti-Parathyroid Hormone-related Protein [23-57-137-1] Standard Size Ab00795-10.3

This antibody was created using our proprietary Fc Silent™ engineered Fc domain containing key point mutations that abrogate binding to Fc gamma receptors.

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

Isotype and Format: Human IgG1, Fc Silent™, Lambda

Clone Number: 23-57-137-1

Alternative Name(s) of Target: PTHrP; PTH-rP; Parathyroid hormone-like protein; PLP; PTHrP[1-34]

UniProt Accession Number of Target Protein: P12272

Published Application(s): crystallize, neutralize

Published Species Reactivity: Human

Immunogen: The anti-PTHrP antibody was prepared by immunizing mice with synthetic human bovine thyroglobulin-conjugated PTHrP (aa 1-34) and generating the hybridoma cell line #23-57-137-1

Specificity: The antibody binds to human PTHrP (The KD ~ 0.1 nM) at a site closely overlapping with the GPCR parathyroid hormone receptor 1 binding site - the epitope is between residues 20 and 30, with some contribution from residues 15-20 (aa 14-34 are important for receptor binding and aa1-34 are important for full signal transduction). PTHrP is known to be a causative factor of humoral 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: The antibody blocks the binding of PTHrP to parathyroid hormone receptor 1 through binding to a site closely overlapping with the receptor-interacting site at the extracellular loop and juxtamembrane regions. The antibody does not block the action of parathyroid hormone (PTH) through the same receptor. The antibody inhibits the action of PTHrP-(1-34) in promoting cAMP production by osteosarcoma cells by 90%. The antibody also functions in vivo, and can treat nude mice rendered hypercalcemic by PAN-7-JCK cells, and prevents cachexia in mice bearing the LC6-JCK human lung cancer xenograft, independent of the calcium-lowering effect of the antibody. The Fab fragment of this antibody, generated by papain digestion, has been used for crystallization of PTHrP at atomic level resolution.

Antibody First Published in: McKinstry et al. Structural basis for antibody discrimination between two

hormones that recognize the parathyroid hormone receptor. J Biol Chem. 2009 Jun 5;284(23):15557-63.
[PMID:19346515](#)

Note on publication: Describes the creation of a neutralizing mAb against human PTHrP. The in vitro and in vivo activity of the mAb was studied and a crystal structure of the Fab fragment complexed with PTHrP (aa 1-108) was generated.

Product Form

Size: 200 µg Purified antibody.

Purification: Protein A affinity purified

Supplied In: PBS with 0.02% Proclin 300.

Storage Recommendation: Store at 4°C for up to 3 months. For longer storage, aliquot and store at -20°C.

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.