

Anti-ganglioside GD3 [KM8871] Standard Size Ab02226-5.0

Isotype and Format: Mouse IgG3, Kappa

Clone Number: KM8871

Alternative Name(s) of Target: ganglioside; C68H121N3O29; (2S,4S,5R)-5-acetamido-6-[(1S,2R)-2-[(2S,4S,5R)-5-acetamido-2-carboxy-4-hydroxy-6-[(1R,2R)-1,2,3-trihydroxypropyl]oxan-2-yl]oxy-1,3-dihydroxypropyl]-2-[(2S,3R,4S,5S,6R)-2-[(2R,3S,4R,6R)-6-[(E,2S,3R)-2-(hexadecanoylamino)-3-hydroxyoctadec-4-enoyl]-4,5-dihydroxy-2-(hydroxymethyl)oxan-3-yl]oxy-3,5-dihydroxy-6-(hydroxymethyl)oxan-4-yl]oxy-4-hydroxyoxane-2-carboxylic acid; CHEBI:89636; d18:1/20:0

UniProt Accession Number of Target Protein:

Published Application(s): neutralizing, Therapeutics development, ELISA

Published Species Reactivity: Human

Immunogen: This antibody was originally raised as a mouse IgG3 (clone KM641) which was turned into a mouse/human chimeric antibody KM871 and, finally, humanized by complementarity-determining region grafting and designated as KM8871 (Shitara et al., 1993; pmid: 8500110; Nakamura et al., 2001; pmid: 11499811).

Specificity: KM8871 recognizes ganglioside GD3, a prominent ganglioside of human melanoma, melanocytes and other cells of neuroectodermal origin. It cross-reacted weakly with GQ1b.

Application Notes: Ganglioside G3 is one of the major gangliosides expressed on most human cancers of neuroectodermal and epithelial origin and is a potential target for passive immunotherapy with monoclonal antibodies. This clone (KM8871) is recommended for the research and development of potential therapeutic agents for immunotherapy and target validation of ganglioside-based vaccine therapy (Nakamura et al., 2001; pmid: 11499811). The potent binding of the humanized antibody KM8871 to the ganglioside GD3 was confirmed by ELISA testing (Nakamura et al., 2001; pmid: 11499811). It was also demonstrated that KM8871 was able to induce CDC (complement-dependent cytotoxicity) and strong ADCC (antibody-dependent cellular cytotoxicity) against ganglioside GD3-expressing cancer cells (Nakamura et al., 2001; pmid: 11499811). Consequently, this humanized antibody can be further investigated as a potential therapeutic candidate against various neuroectodermal and epithelial cancers, either alone or with active molecules conjugated to it.

Antibody First Published in: Nakamura et al. Construction of humanized anti-ganglioside monoclonal antibodies with potent immune effector functions Cancer Immunol Immunother. 2001 Jul;50(5):275-84. doi: 10.1007/pl00006689. PMID:11499811

Note on publication: Describes the generation and characterization of a humanized antibody KM8871 based on a previous mouse/human chimera.

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.