Mouse Chemerin Antibody

Monoclonal Rat IgG_{2B} Clone # 372409

Catalog Number: MAB23251

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Chemerin in ELISAs. In sandwich immunoassays, no cross-reactivity or interference with recombinant human Chemerin, recombinant mouse (rm) Cystatin C, or rmFetuin A is observed.
Source	Monoclonal Rat IgG_{2B} Clone # 372409
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	*E. coli*-derived recombinant mouse Chemerin Thr17-Ser156 Accession # Q9DD06
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with Trehalose.

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.*

Mouse Chemerin Sandwich Immunoassay		**Reagent**
ELISA Capture	2-8 µg/mL	Mouse Chemerin Antibody (Catalog # MAB23251)
ELISA Detection	0.5-2.0 µg/mL	Mouse Chemerin Biotinylated Antibody (Catalog # BAM2325)
Standard		Recombinant Mouse Chemerin (Catalog # 2325-CM)

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.
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** • 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

Mouse Chemerin, also known as Tazarotene-induced Gene-2 (TIG2), is a new, but distant member of the cystatin superfamily (1-3). Members of this superfamily contain at least two intrachain disulfide bonds and an α-helical structure over a distance of about 100 amino acids (aa) (2, 3). Chemerin is synthesized as a 162 aa precursor that contains a hydrophobic N-terminal sequence, an intervening 140 aa cystatin-fold containing domain, and a six aa C-terminal prosegment (4-6). Within the cystatin-fold domain there are three intrachain disulfide bonds that contribute to the characteristic fold (4, 7). The precursor molecule is described as undergoing proteolytic processing at both termini by unknown proteases. The N-terminal 16 residue hydrophobic segment is described as being either a signal sequence or a transmembrane (TM) segment for a type II TM protein (5, 8). In either case it gives rise to a soluble proform that undergoes further processing at the C-terminus (5). In mouse, the C-terminal six residues are cleaved, giving rise to a monomeric, 16 kDa heparin-binding bioactive molecule (aa 17-156) (5-7). A shorter form has been described in human (7). The activity seems to be concentrated in the nine aa's preceding the prosegment (aa 148-156). Retention of the prosegment blocks activity (4). The 140 aa mature segment is known to bind to the G-protein coupled receptor termed ChemR23 (5, 7). Binding results in macrophage and immature dendritic cell chemotaxis (5). The distribution of this receptor is limited to immune APCs, and it is assumed that Chemerin is an inflammatory molecule. It is unclear which cells are actually producing Chemerin, but keratinocytes, endothelial cells and osteoclasts are potential candidates (1, 7). Mature mouse Chemerin shares 67%, 84% and 82% aa sequence identity with human, rat and hamster Chemerin, respectively (6). There is apparently cross-species activity for the protein (6).

References:

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