10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-MRGD / MRGPRD Antibody (Cytoplasmic Domain)

Rabbit Anti Human Polyclonal Antibody
Catalog # ALS17517

Product Information

Application	IHC-P
Primary Accession	Q8TDS7
Predicted	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	36118
Concentration (mg/ml)	1 mg/ml

Additional Information

Gene ID	116512
Alias Symbol	MRGPRD
Other Names	MRGPRD, Beta-alanine receptor, MRGD, MAS-related GPR, member D, TGR7
Target/Specificity	Human MRGPRD. BLAST analysis of the peptide immunogen showed no homology with other human proteins.
Reconstitution & Storage	Immunoaffinity purified
Precautions	Anti-MRGD / MRGPRD Antibody (Cytoplasmic Domain) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MRGPRD {ECO:0000303|PubMed:39580805, ECO:0000312|HGNC:HGNC:29626}
Function	G protein-coupled receptor that acts as a mediator of peripheral pain and itch sensations (PubMed:15037633, PubMed:23091359, PubMed:35840655, PubMed:39580805). Activated by various ligands, such as beta-alanine, beta-aminoisobutyrate, angiotensin 1-7, alamandine and allantoin, causing a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of downstream effectors (PubMed:15037633, PubMed:23091359, PubMed:35840655, PubMed:39580805). MRGPRD is both coupled to G(q) and G(i) G proteins: G(q) coupling activates phospholipase C-beta, releasing diacylglycerol (DAG) and inositol 1,4,5-trisphosphate (IP3) second messengers, while G(i) coupling mediates inhibition of adenylate cyclase activity (PubMed:15037633, PubMed:23091359, PubMed:35840655, PubMed:39580805). MRGPRD is specifically expressed in neurons that innervate the epidermis and acts as a

	key mediator of skin stimuli, such as itch, pain and mechanical stimuli (By similarity). Required to maintain skin homeostasis in response to irritant dermatitis by initiating a signaling that promotes glutamate release, inhibiting mast cell hyperresponsiveness and skin inflammation (By similarity). Required to prevent cardiomyocyte hypertrophy following activation by alamandine, a decarboxylation product of angiotensin 1-7 (By similarity). Acts as a receptor for allantoin in dorsal root ganglion neurons, eliciting chronic itch (pruritus) (By similarity).
Cellular Location	Cell membrane; Multi-pass membrane protein. Note=Localized at the plasma membrane but internalized into the cytoplasm after treatment with beta-alanine

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.