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GFRAL Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP11069B

Product Information

Application	WB, IHC-P, FC, E
Primary Accession	Q6UXV0
Other Accession	NP_997293.2
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB28881
Calculated MW	44518
Antigen Region	366-394

Additional Information

Gene ID	389400
Other Names	GDNF family receptor alpha-like, GFRAL, C6orf144
Target/Specificity	This GFRAL antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 366-394 amino acids from the C-terminal region of human GFRAL.
Dilution	WB~~1:1000 IHC-P~~1:100~500 FC~~1:10~50 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.05% (V/V) Proclin 300. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	GFRAL Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	GFRAL {ECO:0000303|PubMed:28846097, ECO:0000312|HGNC:HGNC:32789}
Function	Brainstem-restricted receptor for GDF15 hormone, which triggers an aversive response, characterized by nausea, vomiting, and/or loss of appetite

in response to various stresses (PubMed:28846097, PubMed:28846098, PubMed:28846099, PubMed:28953886, PubMed:36630958). The aversive response is both required to reduce continuing exposure to those stresses at the time of exposure and to promote avoidance behavior in the future (PubMed:28846097, PubMed:28846098, PubMed:28846099, PubMed:28953886, PubMed:36630958). The GDF15-GFRAL aversive response is triggered by stresses, such as anticancer drugs (camptothecin or cisplatin), cancers or drugs such as metformin (PubMed:32661391). Upon interaction with its ligand, GDF15, mediates the GDF15-induced autophosphorylation and activation of the RET tyrosine kinase receptor, leading to activation of MAPK- and AKT- signaling pathways (PubMed:31535977, PubMed:32661391). Ligand-binding activates GFRAL-expressing neurons localized in the area postrema and nucleus tractus solitarius of the brainstem (By similarity). The GDF15-GFRAL signal induces expression of genes involved in metabolism, such as lipid metabolism in adipose tissues (PubMed:32661391).

Cellular Location

Cell membrane; Single-pass membrane protein; Extracellular side

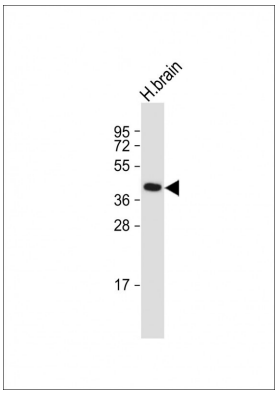
Tissue Location

Expressed in the brainstem, restricted to cells in the area postrema and the immediately adjacent region of the nucleus tractus solitarius (at protein level) (PubMed:28846097, PubMed:28846098). Detected at low levels in testis and adipose tissue (PubMed:28846097).

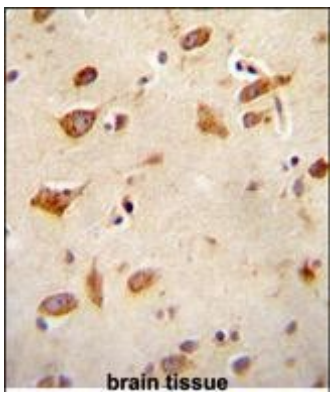
References

Fellay, J., et al. PLoS Genet. 5 (12), E1000791 (2009) :
Li, Z., et al. J. Neurochem. 95(2):361-376(2005)
Mungall, A.J., et al. Nature 425(6960):805-811(2003)
Clark, H.F., et al. Genome Res. 13(10):2265-2270(2003)

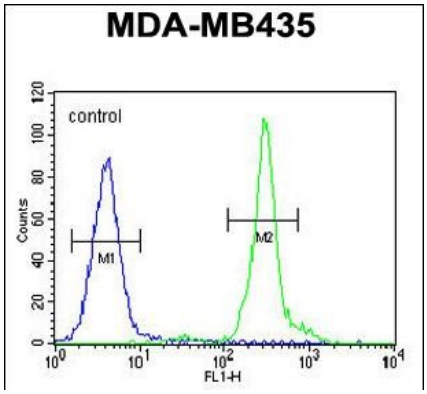
Images



Anti-GFRAL Antibody (C-term) at 1:1000 dilution + Human brain whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 45 kDa Blocking/Dilution buffer: 5% NFDM/TBST.



GFRAL antibody (C-term) (Cat. #AP11069b) immunohistochemistry analysis in formalin fixed and paraffin embedded human brain tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of the GFRAL antibody (C-term) for immunohistochemistry. Clinical relevance has not been evaluated.



GFRAL Antibody (C-term) (Cat. #AP11069b) flow cytometric analysis of MDA-MB435 cells (right histogram) compared to a negative control cell (left histogram).FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.