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OXTR Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP17658a

Product Information

Application	WB, E
Primary Accession	P30559
Other Accession	NP_000907.2
Reactivity	Human, Mouse
Predicted	Rat, Bovine, Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB36838
Calculated MW	42772
Antigen Region	8-36

Additional Information

Gene ID	5021
Other Names	Oxytocin receptor, OT-R, OXTR
Target/Specificity	This OXTR antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 8-36 amino acids from the N-terminal region of human OXTR.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. 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	OXTR Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	OXTR {ECO:0000303|PubMed:20647384, ECO:0000312|HGNC:HGNC:8529}
Function	G protein-coupled receptor for oxytocin (OXT), a neuropeptide hormone released by the posterior pituitary gland that plays a key role in social behavior and other biological processes, such as milk ejection

(PubMed:11923477, PubMed:22069312, PubMed:32832646, PubMed:35104164, PubMed:35241813, PubMed:35851571). Ligand binding causes a conformation change that triggers signaling via guanine nucleotide-binding proteins (G proteins) and modulates the activity of downstream effectors, such as phospholipase C (PubMed:22069312, PubMed:32832646, PubMed:35104164, PubMed:35241813, PubMed:35851571). OXTR is mainly coupled to G(q) G proteins and mediates production of diacylglycerol (DAG) and inositol 1,4,5-trisphosphate (IP3) second messengers that modulate the activity of phosphatidylinositol 3-kinase and promote the release of Ca(2+) ions from intracellular stores, respectively (PubMed:11923477, PubMed:22069312, PubMed:32832646, PubMed:35104164, PubMed:35241813, PubMed:35851571). In presence of high levels of oxytocin, also coupled to G(i) G proteins, mediating inhibition of adenylate cyclase activity (PubMed:22069312, PubMed:35241813, PubMed:35851571). Central release of oxytocin plays essential roles in social behavior, such as maternal care, social cognition and affiliative behaviors, triggering signaling that modulates neural circuits by altering ion channel activity, changing intrinsic neuronal properties and modifying synaptic transmission (both excitatory and inhibitory) (PubMed:19934046, PubMed:20647384, PubMed:21896752, PubMed:22123970, PubMed:24367110). Peripheral release of oxytocin (secretion into the bloodstream) promotes various processes, such as parturition, lactation or osteoblast differentiation (PubMed:6278592). OXTR-mediated signaling promotes milk ejection by triggering and strengthening contraction of the smooth muscle of mammary gland (By similarity).

Cellular Location Cell membrane; Multi-pass membrane protein

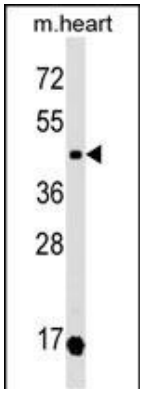
Background

The protein encoded by this gene belongs to the G-protein coupled receptor family and acts as a receptor for oxytocin. Its activity is mediated by G proteins which activate a phosphatidylinositol-calcium second messenger system. The oxytocin-oxytocin receptor system plays an important role in the uterus during parturition.

References

Romero, R., et al. Am. J. Obstet. Gynecol. 203 (4), 361 (2010) :
Kim, H.S., et al. Proc. Natl. Acad. Sci. U.S.A. 107(36):15717-15721(2010)
Thompson, R.J., et al. Psychoneuroendocrinology (2010) In press :
Tost, H., et al. Proc. Natl. Acad. Sci. U.S.A. 107(31):13936-13941(2010)
Amrani, Y., et al. Respir. Res. 11, 104 (2010) :

Images



OXTR Antibody (N-term) (Cat. #AP17658a) western blot analysis in mouse heart tissue lysates (35ug/lane).This demonstrates the OXTR antibody detected the OXTR protein (arrow).

Citations

- Tph2-/- female mice restore socio-sexual recognition through upregulating ERα and OTR genes in the amygdala.

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