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Anti-Oxytocin Receptor Rabbit Monoclonal Antibody

Catalog # ABO15661

Product Information

Application	WB, IHC
Primary Accession	P30559
Host	Rabbit
Isotype	IgG
Reactivity	Rat, Human, Mouse
Clonality	Monoclonal
Format	Liquid
Description	Anti-Oxytocin Receptor Rabbit Monoclonal Antibody . Tested in WB, IHC application. This antibody reacts with Human, Mouse, Rat.

Additional Information

Gene ID	5021
Other Names	Oxytocin receptor, OT-R, OXTR
Calculated MW	42772
Application Details	WB 1:500-1:2000 IHC 1:50-1:200
Source	Eukaryota
Contents	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol, 0.4-0.5mg/ml BSA.
Clone Names	Clone: 22O37
Immunogen	A synthesized peptide derived from human Oxytocin Receptor
Purification	Affinity-chromatography
Storage	Store at -20°C for one year. For short term storage and frequent use, store at 4°C for up to one month. Avoid repeated freeze-thaw cycles.

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

Images

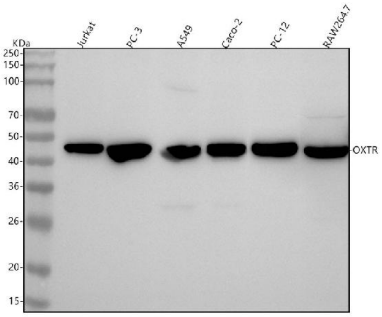
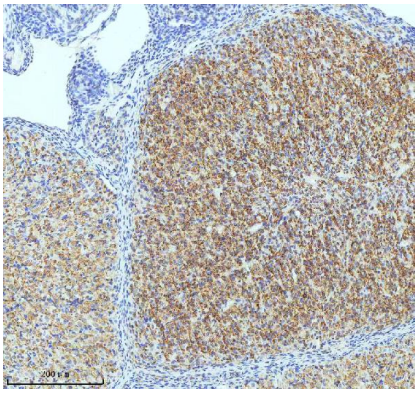


Figure 1. Western blot analysis of OXTR using anti-OXTR antibody (M01566).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Jurkat whole cell lysates,
Lane 2: human PC-3 whole cell lysates,
Lane 3: human A549 whole cell lysates,
Lane 4: human Caco-2 whole cell lysates,
Lane 5: rat PC-12 whole cell lysates,
Lane 6: mouse RAW264.7 whole cell lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-OXTR antigen affinity purified monoclonal antibody (Catalog # M01566) at 1:500 overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:500 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for OXTR at approximately 43 kDa. The expected band size for OXTR is at 43 kDa.

Figure 2. IHC analysis of OXTR using anti-OXTR antibody (M01566).



OXTR was detected in a paraffin-embedded section of rat ovary tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:50 rabbit anti-OXTR Antibody (M01566) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

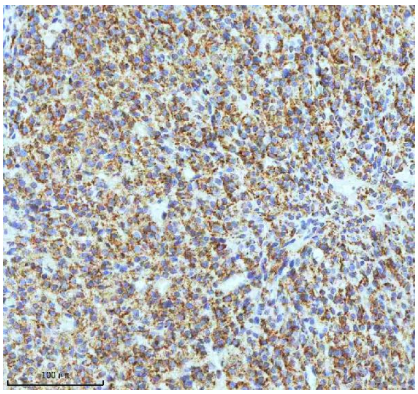


Figure 3. IHC analysis of OXTR using anti-OXTR antibody (M01566).
OXTR was detected in a paraffin-embedded section of rat ovary tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1:50 rabbit anti-OXTR Antibody (M01566) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

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