Anti-Oxytocin-neurophysin 1 / OXT Antibody [PSH08-24]

HA722968

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat, Cynomolgus monkey, Pig
Applications:	WB, IHC-P, IHC-Fr, IF-Tissue
Molecular Wt:	Predicted band size: 13 kDa
Clone number:	PSH08-24

Description: Oxytocin is a peptide hormone and neuropeptide normally produced in the hypothalamus and released by the posterior pituitary. Present in animals since early stages of evolution, in humans it plays roles in behavior that include social bonding, love, reproduction, childbirth, and the period after childbirth. Oxytocin is released into the bloodstream as a hormone in response to sexual activity and during childbirth. It is also available in pharmaceutical form. In either form, oxytocin stimulates uterine contractions to speed up the process of childbirth. In its natural form, it also plays a role in maternal bonding and milk production. Production and secretion of oxytocin is controlled by a positive feedback mechanism, where its initial release stimulates production and release of further oxytocin. For example, when oxytocin is released during a contraction of the uterus at the start of childbirth, this stimulates production and release of more oxytocin and an increase in the intensity and frequency of contractions. This process compounds in intensity and frequency and continues until the triggering activity ceases. A similar process takes place during lactation and during sexual activity.

Immunogen: Recombinant protein within human OXT aa 1-125.

Positive control: Mouse paraventricular nucleus tissue, rat supraoptic nucleus tissue, mouse pituitary tissue, rat pituitary tissue, Mouse pituitary tissue lysate, Rat pituitary tissue lysate.

Subcellular location: Secreted.

Database links: SwissProt: P01178 Human | P35454 Mouse
Entrez Gene: 25504 Rat

Recommended Dilutions:

WB	1:1,000
IHC-P	1:2,000-1:5,000
IHC-Fr	1:500-1:1,000
IF-Tissue	1:2,000

Storage Buffer: PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Shipped at 4℃. Store at +4℃ short term (1-2 weeks). Store at -20℃ long term.

Purity: Protein A affinity purified.

Images

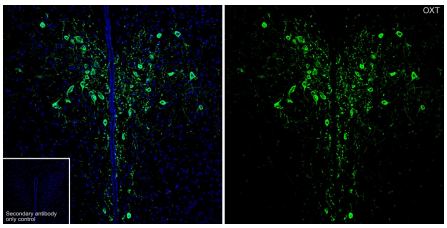

Fig1: Application: IHC-Fr

Species: Mouse

Site: Paraventricular nucleus

Sample: Frozen section

Antibody concentration: 1/500

Antigen retrieval: Not required

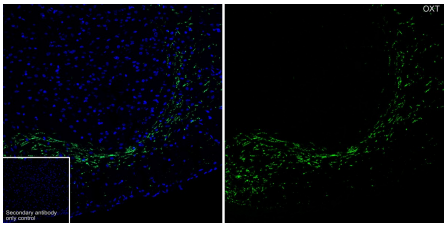

Fig2: Application: IHC-Fr

Species: Rat

Site: Supraoptic nucleus

Sample: Frozen section

Antibody concentration: 1/500

Antigen retrieval: Not required

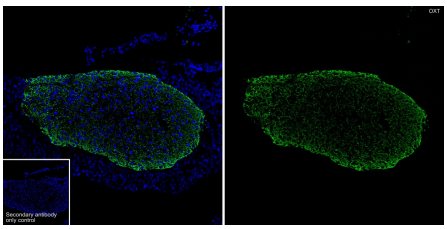

Fig3: Application: IF-tissue

Species: Mouse

Site: Pituitary

Sample: Paraffin-embedded section

Antibody concentration: 1/2,000

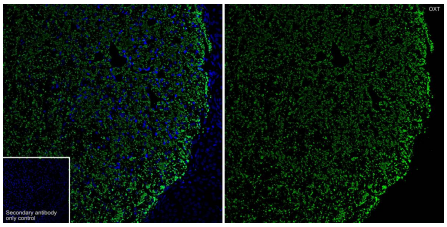

Fig4: Application: IF-tissue

Species: Rat

Site: Pituitary

Sample: Paraffin-embedded section

Antibody concentration: 1/2,000

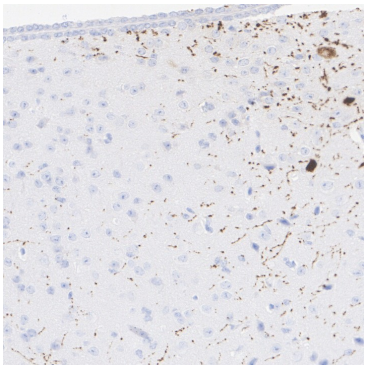

Fig5: Immunohistochemical analysis of paraffin-embedded mouse paraventricular nucleus tissue with Rabbit anti-Oxytocin-neurophysin 1 / OXT antibody (HA722968) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA722968) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

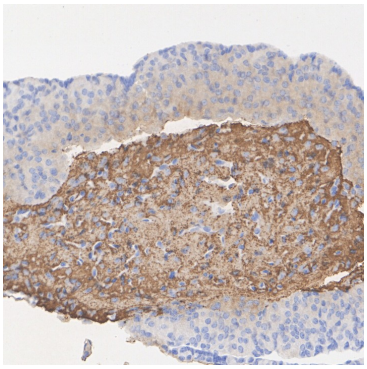

Fig6: Immunohistochemical analysis of paraffin-embedded mouse pituitary tissue with Rabbit anti-Oxytocin-neurophysin 1 / OXT antibody (HA722968) at 1/5,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA722968) at 1/5,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

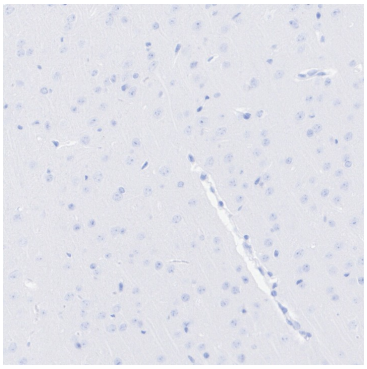

Fig7: Immunohistochemical analysis of paraffin-embedded mouse cerebral cortex tissue (negative) with Rabbit anti-Oxytocin-neurophysin 1 / OXT antibody (HA722968) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA722968) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

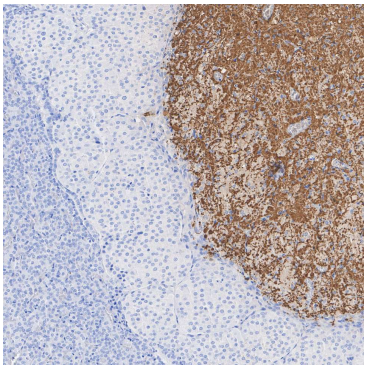

Fig8: Immunohistochemical analysis of paraffin-embedded rat pituitary tissue with Rabbit anti-Oxytocin-neurophysin 1 / OXT antibody (HA722968) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA722968) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

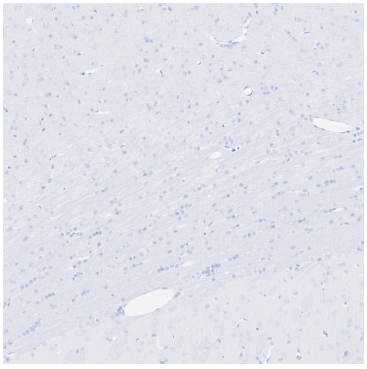

Fig9: Immunohistochemical analysis of paraffin-embedded rat cerebral cortex tissue (negative) with Rabbit anti-Oxytocin-neurophysin 1 / OXT antibody (HA722968) at 1/2,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA722968) at 1/2,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

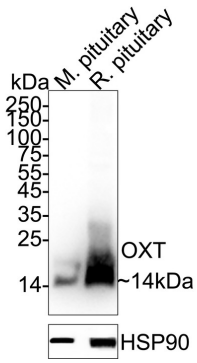

Fig10: Western blot analysis of Oxytocin-neurophysin 1 / OXT on different lysates with Rabbit anti-Oxytocin-neurophysin 1 / OXT antibody (HA722968) at 1/1,000 dilution.

Lane 1: Mouse pituitary tissue lysate
Lane 2: Rat pituitary tissue lysate

Lysates/proteins at 40 µg/Lane.

Predicted band size: 13 kDa
Observed band size: 14 kDa

Exposure time: 4 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (HA722968) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. De Leon D et al. Methylation of OXT and OXTR genes, central oxytocin, and social behavior in female macaques. Horm Behav. 2020 Nov
2. Khazaal NM et al. The relationship between OXT gene polymorphisms and reproductive hormones in pregnant and lactating Awassi Ewes. Mol Biol Rep. 2023 Oct