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**[ Primary Antibody ]**

# Rabbit Anti-Orexin A antibody

**Catalog Number: SL15509R**

**FOR RESEARCH USE ONLY**

**[ DATASHEET ]**

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| **Host:** | Rabbit |
| **Isotype:** | IgG |
| **Clonality:** | Polyclonal |
| **Target:** | Orexin A |
| **Immunogen:** | KLH conjugated synthetic peptide derived from human Orexin A: 34-66/131 |
| **Purification:** | affinity purified by Protein A |
| **Concentration:** | 1mg/ml |
| **Storage:** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. Shipped at 4℃. Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. |
| **Applications:** | WB=1:500-2000<br>ELISA=1:5000-10000<br>not yet tested in other applications.<br>optimal dilutions/concentrations should be determined by the end user. |
| **Reactivity:** | Human, Mouse, Rat |
| **Predicted MW.:** | 13kDa |
| **Subcellular Location:** | Secretory protein |
| **Background:** | This gene encodes a hypothalamic neuropeptide precursor protein that gives rise to two mature neuropeptides, orexin A and orexin B, by proteolytic processing. Orexin A and orexin B, which bind to orphan G-protein coupled receptors HCRTR1 and HCRTR2, function in the regulation of sleep and arousal. This neuropeptide arrangement may also play a role in feeding behavior, metabolism, and homeostasis.<br>**Function:** Neuropeptides that play a significant role in the regulation of food intake and sleep-wakefulness, possibly by coordinating the complex behavioral and physiologic responses of these complementary homeostatic functions. A broader role in the homeostatic regulation of energy metabolism, autonomic function, hormonal balance and the regulation of body fluids, is also suggested. Orexin-A binds to both OX1R and OX2R with a high affinity, whereas orexin-B binds only to OX2R with a similar high affinity.<br>**Subcellular Location:** Rough endoplasmic reticulum. Cytoplasmic vesicle. |

Important Note: This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

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| | Cell junction, synapse. Note=Associated with perikaryal rough endoplasmic reticulum as well as cytoplasmic large granular vesicles at synapses.<br>**Tissue Specificity:** Abundantly expressed in subthalamic nucleus but undetectable in other brain regions tested (hypothalamus was not tested) and in heart, placenta, lung, liver, skeletal muscle, kidney and pancreas.<br>**Post-translational modifications:** Specific enzymatic cleavages at paired basic residues yield the different active peptides.<br>DISEASE: Defects in HCRT are the cause of narcolepsy type 1 (NRCLP1) [MIM:161400]. Narcolepsy is a neurological disabling sleep disorder, characterized by excessive daytime sleepiness, sleep fragmentation, symptoms of abnormal rapid-eye-movement (REM) sleep, such as cataplexy, hypnagogic hallucinations, and sleep paralysis. Cataplexy is a sudden loss of muscle tone triggered by emotions, which is the most valuable clinical feature used to diagnose narcolepsy. Human narcolepsy is primarily a sporadically occurring disorder but familial clustering has been observed. Note=Human narcolepsy is associated with a deficient orexin system. Orexins are absent and/or greatly diminished in the brain and cerebrospinal fluid (CSF) of most narcoleptic patients.<br>**Similarity:** Belongs to the orexin family.<br>**Database links:**<br>**Entrez Gene:** 3060 Human<br>Omim: 602358 Human<br>**SwissProt:** O43612 Human<br>**Unigene:** 158348 Human |

## [ VALIDATION IMAGES ]

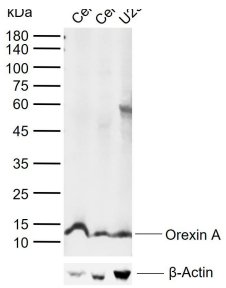



Figure 1. Sample: Lane 1: Mouse Cerebrum tissue lysates Lane 2: Rat Cerebrum tissue lysates Lane 3: Human U251 cell lysates Primary: Anti- Orexin A (SL15509R) at 1/1000 dilution Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution Predicted band size: 13 kDa Observed band size: 12 kDa

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