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# OR6A2 Rabbit pAb

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Catalog # AP56916

## Product Information

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| **Application** | IHC-P, IHC-F, IF, E |
| **Primary Accession** | O95222 |
| **Predicted** | Human |
| **Host** | Rabbit |
| **Clonality** | Polyclonal |
| **Calculated MW** | 36154 |
| **Physical State** | Liquid |
| **Immunogen** | KLH conjugated synthetic peptide derived from human OR6A2 |
| **Epitope Specificity** | 31-130/327 |
| **Isotype** | IgG |
| **Purity** | affinity purified by Protein A |
| **Buffer** | 0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol. |
| **Important Note** | This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications. |
| **Background Descriptions** | Olfactory receptors interact with odorant molecules in the nose, to initiate a neuronal response that triggers the perception of a smell. The olfactory receptor proteins are members of a large family of G-protein-coupled receptors (GPCR) arising from single coding-exon genes. Olfactory receptors share a 7-transmembrane domain structure with many neurotransmitter and hormone receptors and are responsible for the recognition and G protein-mediated transduction of odorant signals. The olfactory receptor gene family is the largest in the genome. The nomenclature assigned to the olfactory receptor genes and proteins for this organism is independent of other organisms. [provided by RefSeq, Jul 2008] |

## Additional Information

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| **Gene ID** | 8590 |
| **Other Names** | Olfactory receptor 6A2, Olfactory receptor 11-55, OR11-55, Olfactory receptor 6A1, Olfactory receptor OR11-83, hP2 olfactory receptor, OR6A2, OR6A1, OR6A2P |
| **Dilution** | IHC-P=1:100-500,IHC-F=1:100-500,ICC/IF=1:100-500,IF=1:100-500,ELISA=1:5000-10000 |
| **Storage** | Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C. |

## Protein Information

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| **Name** | OR6A2 {ECO:0000303\|PubMed:41570822, ECO:0000312\|HGNC:HGNC:15301} |
| **Function** | Odorant receptor for medium-chain aliphatic aldehydes, such as octanal, nonanal and trans-2-decenal (PubMed:41570822). Activated by aliphatic aldehydes with chains ranging from 5 to 11 carbon atoms, with preference for octanal (C8) (PubMed:41570822). Ligand-binding involves the formation of a reversible covalent Schiff base linkage with the aldehyde, causing a conformation change that triggers signaling via G(s)-class of G alpha proteins (GNAL/G(olf) or GNAS/G(s)) (PubMed:41570822). In olfactory epithelium, couples to GNAL/G(olf), mediating activation of adenylate cyclase activity and increased production of cAMP, initiating a neuronal response that triggers the perception of a smell (PubMed:41570822). Beyond its role in olfaction, also acts as a regulator of inflammation (PubMed:35025664). In macrophages, activation by octanal, a product of lipid peroxidation during oxidative stress, triggers a signaling that promotes activation of the NLRP3 inflammasome, leading to the production of pro- inflammatory cytokines, such as IL1B, exacerbating inflammatory processes in vascular macrophages and contributing to atherosclerosis (PubMed:35025664). Outside of the olfactory system, in tissues lacking GNAL/G(olf), couples to GNAS/G(s), promoting activation of adenylate cyclase activity and production of cAMP (PubMed:41570822). |
| **Cellular Location** | Cell membrane; Multi-pass membrane protein |
| **Tissue Location** | Olfactory epithelium (PubMed:14983052). Also expressed in vascular macrophages, bone marrow-derived macrophages and aortic macrophages (PubMed:35025664). |

## Background

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