

# Recombinant Human Protein Tyrosine Phosphatase, Receptor Type, G

**Cat. No.** PTPRG-1305H    **Lot. No.** (See product label)

## SPECIFICATION

|                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
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| <b>Product Overview</b>  | Recombinant humanPTPRG is expressed in E. coli; it contains the catalytic domain of PTPRG(residues 801-1147) and has a molecular weight of 39.6 kDa.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Species</b>           | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Source</b>            | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>ProteinLength</b>     | 801-1147 a.a.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Description</b>       | PTPRG, together withPTPζ, form a distinct RPTP family. Both molecules are highly expressed in thecentral nervous system with PTPRG also expressed in some peripheral tissues.In the central nervous system, PTPRG expression is increased during corticaldevelopment, and maintained in regions containing post-mitotic neurons. It has been reported that PTPRG inhibits NGF-induced neurite outgrowth of PC12Dcells through modulation of p13 complex. In addition, reduced expression of PTPRGis associated with lung, ovarian and breast cancers. Human PTPRG is areceptor protein tyrosine phosphatase containing 1445 amino acids. |
| <b>Form</b>              | 25 mM Tris-HCl (pH8.0), 75 mM NaCl, 0.05% Tween-20, 2 mM EDTA, 1 mM DTT and 50% glycerol.Liquid at -20°C.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Purity</b>            | Greater than 95% asdetermined by Coomassie-stained SDS-PAGE gel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Specific Activity</b> | 16 U/μg. One unitwill hydrolyze 1 nmol of p-nitrophenyl phosphate per minute at pH                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

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|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | 7.4 and 30°C. Assay buffer: 50 mM HEPES (pH 7.4), 2 mM EDTA, 3 mM DTT, 100 mM NaCl and 50 mM pNPP.                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Applications</b>     | Removal of phosphates from target substrates. Useful for the study of enzyme kinetics, regulation and for inhibitors screening.                                                                                                                                                                                                                                                                                                                                        |
| <b>Storage</b>          | 6 months at -20°C.                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Official Symbol</b>  | PTPRG                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>GENE INFORMATION</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Gene Name</b>        | PTPRG protein tyrosine phosphatase, receptor type, G [ Homo sapiens ]                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Synonyms</b>         | PTPRG; protein tyrosine phosphatase, receptor type, G; PTPG; HPTPG; RPTPG; R-PTP-GAMMA; receptor-type tyrosine-protein phosphatase gamma; H_RG317H01.1; OTTHUMP00000213232; OTTHUMP00000213233; protein tyrosine phosphatase gamma; protein-tyrosine phosphatase gamma; receptor tyrosine phosphatase gamma; receptor-type protein phosphatase gamma; receptor type protein tyrosine phosphatase gamma; protein tyrosine phosphatase, receptor type, gamma polypeptide |
| <b>Gene ID</b>          | 5793                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>mRNA Refseq</b>      | NM_002841                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Protein Refseq</b>   | NP_002832                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>MIM</b>              | 176886                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>UniProt ID</b>       | P23470                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

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|------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Chromosome Location</b>         | 3p21-p14                                                                                                                                         |
| <b>Function</b>                    | hydrolase activity;identical protein binding; protein tyrosine phosphatase activity;transmembrane receptor protein tyrosine phosphatase activity |
| <b>PDBrendering based on 2h4v.</b> |                                                                                                                                                  |

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