

**A**

**ORENZA** 56 orphans are present in the KEGG pathway: '*01130 Lipid Metabolism*'

| KEGG METABOLISM PATHWAY                                          | ORPHANS                   |
|------------------------------------------------------------------|---------------------------|
| <a href="#">00061 Fatty acid biosynthesis</a>                    | <a href="#">1</a>         |
| <a href="#">00062 Fatty acid elongation in mitochondria</a>      | <a href="#">1</a>         |
| <a href="#">00071 Fatty acid metabolism</a>                      | <a href="#">6</a>         |
| <a href="#">00072 Synthesis and degradation of ketone bodies</a> | -                         |
| <a href="#">00100 Biosynthesis of steroids</a>                   | <a href="#">1</a>         |
| <a href="#">00120 Bile acid biosynthesis</a>                     | <a href="#">6</a>         |
| <a href="#">00140 C21-Steroid hormone metabolism</a>             | <a href="#">2</a>         |
| <a href="#">00150 Androgen and estrogen metabolism</a>           | <a href="#">8</a>         |
| <a href="#">00561 Glycerolipid metabolism</a>                    | <a href="#">8</a>         |
| <b><a href="#">00564 Glycerophospholipid metabolism</a></b>      | <b><a href="#">19</a></b> |
| <a href="#">00590 Arachidonic acid metabolism</a>                | <a href="#">4</a>         |
| <a href="#">00591 Linoleic acid metabolism</a>                   | <a href="#">1</a>         |

**B**

**ORENZA** 19 orphans are present in the KEGG pathway: '*00564 Glycerophospholipid metabolism*'

| EC NUMBER                     | COMMON NAME                                                           | ORPHAN              |
|-------------------------------|-----------------------------------------------------------------------|---------------------|
| <a href="#">EC 1.14.99.19</a> | <a href="#">plasmanylethanolamine desaturase</a>                      | <a href="#">Yes</a> |
| <a href="#">EC 2.3.1.23</a>   | <a href="#">1-acylglycerophosphocholine O-acyltransferase</a>         | <a href="#">Yes</a> |
| <a href="#">EC 2.3.1.25</a>   | <a href="#">plasmalogen synthase</a>                                  | <a href="#">Yes</a> |
| <a href="#">EC 2.3.1.52</a>   | <a href="#">2-acylglycerol-3-phosphate O-acyltransferase</a>          | <a href="#">Yes</a> |
| <a href="#">EC 2.3.1.62</a>   | <a href="#">2-acylglycerophosphocholine O-acyltransferase</a>         | <a href="#">Yes</a> |
| <a href="#">EC 2.3.1.63</a>   | <a href="#">1-alkylglycerophosphocholine O-acyltransferase</a>        | <a href="#">Yes</a> |
| <a href="#">EC 2.3.1.67</a>   | <a href="#">1-alkylglycerophosphocholine O-acetyltransferase</a>      | <a href="#">Yes</a> |
| <a href="#">EC 2.3.1.70</a>   | <a href="#">CDP-acylglycerol O-arachidonoyltransferase</a>            | <a href="#">Yes</a> |
| <a href="#">EC 2.3.1.104</a>  | <a href="#">1-alkenylglycerophosphocholine O-acyltransferase</a>      | <a href="#">Yes</a> |
| <a href="#">EC 2.3.1.105</a>  | <a href="#">alkylglycerophosphate 2-O-acetyltransferase</a>           | <a href="#">Yes</a> |
| <a href="#">EC 2.3.1.121</a>  | <a href="#">1-alkenylglycerophosphoethanolamine O-acyltransferase</a> | <a href="#">Yes</a> |
| <a href="#">EC 2.3.1.149</a>  | <a href="#">platelet-activating factor acetyltransferase</a>          | <a href="#">Yes</a> |
| <a href="#">EC 2.7.8.4</a>    | <a href="#">serine-phosphoethanolamine synthase</a>                   | <a href="#">Yes</a> |
| <a href="#">EC 2.7.8.22</a>   | <a href="#">1-alkenyl-2-acylglycerol choline phosphotransferase</a>   | <a href="#">Yes</a> |
| <a href="#">EC 3.1.3.59</a>   | <a href="#">alkylacetylgllycerophosphatase</a>                        | <a href="#">Yes</a> |
| <a href="#">EC 3.1.4.2</a>    | <a href="#">glycerophosphocholine phosphodiesterase</a>               | <a href="#">Yes</a> |
| <a href="#">EC 3.3.2.2</a>    | <a href="#">alkenylglycerophosphocholine hydrolase</a>                | <a href="#">Yes</a> |
| <a href="#">EC 3.3.2.5</a>    | <a href="#">alkenylglycerophosphoethanolamine hydrolase</a>           | <a href="#">Yes</a> |
| <a href="#">EC 3.6.1.16</a>   | <a href="#">CDP-glycerol diphosphatase</a>                            | <a href="#">Yes</a> |