Table S1 Fatty acid composition of DHA-TG and DHA-PL

Main fatty acids (% of total FA)	DHA-TG	DHA-PL
C14:0	4.09	2.28
C16:0	0.56	28.11
C16:1	5.67	0.57
C18:0	0.37	8.44
C18:1n-9	10.8	6.21
C18:2n-6	0.65	nd
C18:3n-3	0.39	0.26
C20:1n-9	0.82	10.6
C20:4n-6 (AA)	nd	2.09
C20:5n-3 (EPA)	4.6	10.6
C22:6n-3 (DHA)	39	32.8

Note: DHA-TG: Fish oil rich in DHA in the form of TGs. DHA-PL: squid (*S.oualaniensis*) roe extract rich in DHA in the form of PLs. "nd" means not detected.

Table S2 Ingredient and fatty acid composition of the experimental diets

Ingredient	O-3 Def	DHA-TG	DHA-PL
Casein	200	200	200
Sucrose	100	100	100
Cornstarch	150	150	150
Maltose-dextrin	150	150	150
dextrose	199	199	199
Cellulose	50	50	50
Mineral-salt mix	35	35	35
Vitamin mix	10	10	10
L-methionine	3	3	3
Choline bitartrate	2.5	2.5	2.5
TBHQ	0.02	0.02	0.02
Hydrogenated coconut oil	81	78.3	75.2
Safflower oil	19	19	19
DHA-TG	0	2.7	0
DHA-PL	0	0	5.8
Main fat acids Composition %			
C18:2 n-6	15.10	12.94	10.55

C18:3 n-3	0.04	0.18	0.21
C20:4 n-6	nd	nd	nd
C20:5 n-3	nd	0.53	1.06
C22:6 n-3	nd	3.97	2.98

The experimental diets, an O-3 fatty acid deficient diet (O-3 Def), was based on the AIN-93 [30] formulation with several modifications to obtain the extremely low basal level of n-3 fatty acid required in this study. "nd" means not detected.

Table S3 Effects of dietary supplement of DHA-TG and DHA-PL at 3 or 7-weeks of age on the major brain fatty acid composition.

Fatty acids	O-3 Def	3-week	7-week

		DHA-TG	DHA-PL	DHA-TG	DHA-PL
C14:0	0.89±0.12	0.67±0.13	0.61±0.16	0.78±0.13	0.60±0.14
C16:0	22.41±0.64	20.87±1.10	23.17±0.85	20.67±0.91	22.37±0.70
C18:0	17.65±0.32	16.78±0.29	16.15±0.37	17.68±0.29	16.68±0.35
C16:1	0.85±0.11^{a}	1.36±0.16^{b}	1.41±0.14^{b}	1.21±0.11^{b}	1.34±0.16^{b}
C18:1 n-9	18.38±0.91	17.33±0.52	17.02±0.66	16.93±0.82	17.62±0.76
C18:2 n-6	1.64±0.11^{a}	1.24±0.31^{b}	1.17±0.34^{b}	1.44±0.35^{b}	1.05±0.46^{b}
C18:3 n-3	0.41±0.21^{a}	0.56±0.22^{a}	0.76±0.18^{b}	0.58±0.11^{a}	0.73±0.20^{b}
C20:4 n-6	10.6±0.12^{a}	9.80±0.42^{b}	8.70±0.31^{c}	9.80±0.35^{d}	9.0±0.34^{b}
C20:5 n-3	nd	nd	nd	nd	nd
C22:5 n-6	3.60±0.23^{a}	1.86±0.15^{b}	1.63±0.22^{b}	2.31±0.19^{c}	1.81±0.24^{b}
C22:6 n-3	9.15±0.12^{a}	15.1±0.36^{b}	16.81±1.6^{c}	13.42±0.69^{d}	15.73±1.71^{c}

Values are presented as the mean ± SEM (n=8). $p < 0.05$ was considered to indicate statistically significant. Different letter indicates significantly difference between each group. Some minor and unidentified peaks were not listed,"nd" means not detected.