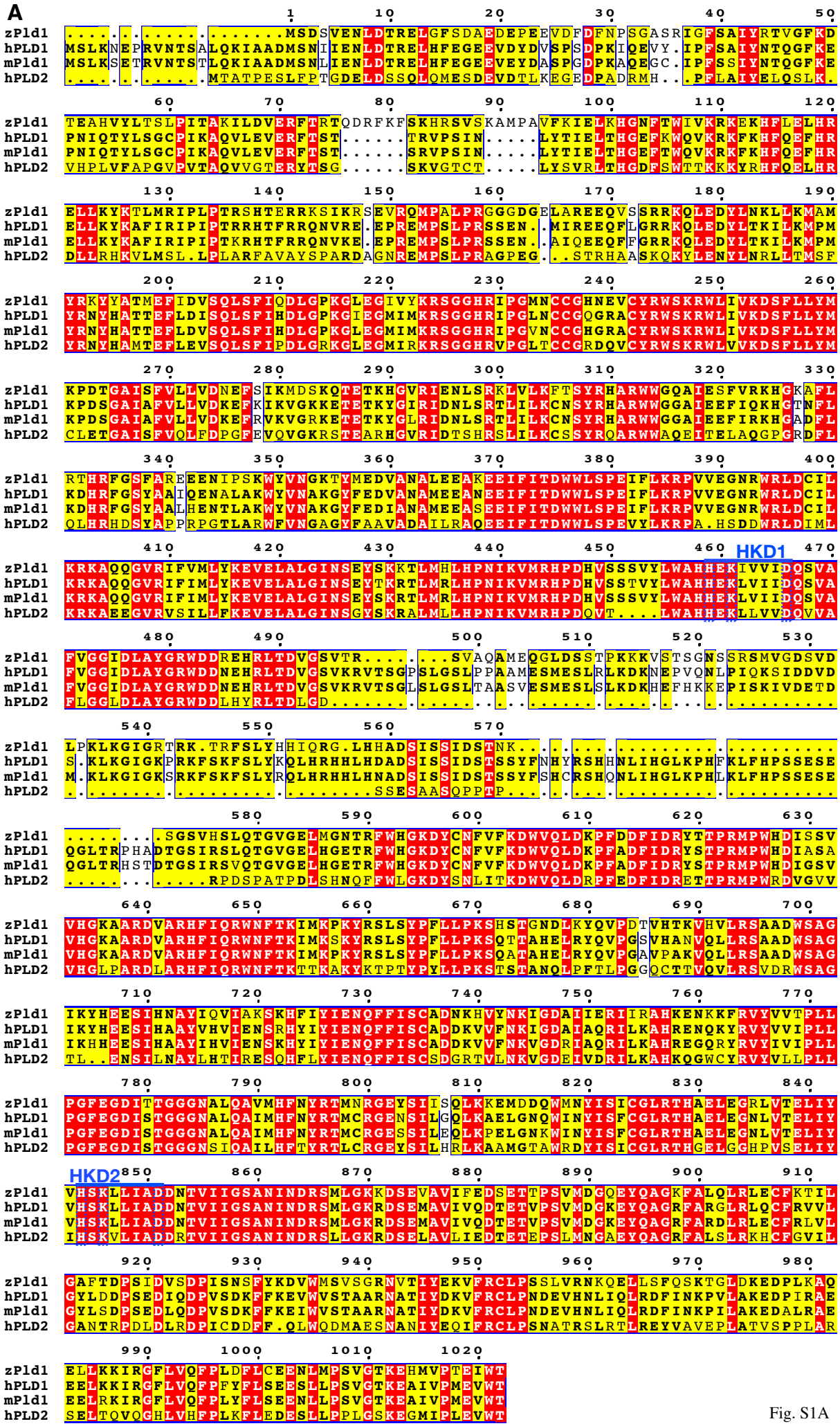
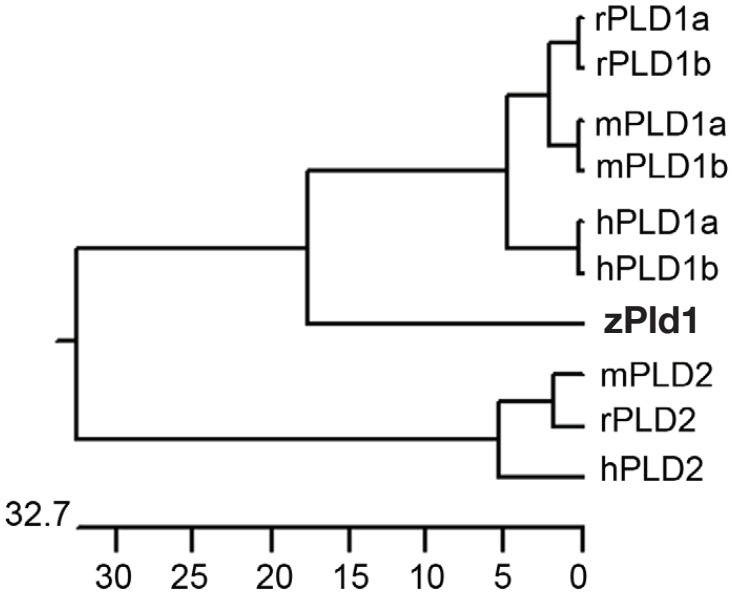


Fig. S1A

B



C

	zPld1
hPLD1a	65.6
hPLD1b	67.5
mPLD1a	65.4
mPLD1b	67.8
rPLD1a	64.7
rPLD1b	66.2
hPLD2	50.5
mPLD2	49.6
rPLD2	50.3
dPLD	35.7
yPLD	24.3

Fig. S1B&C

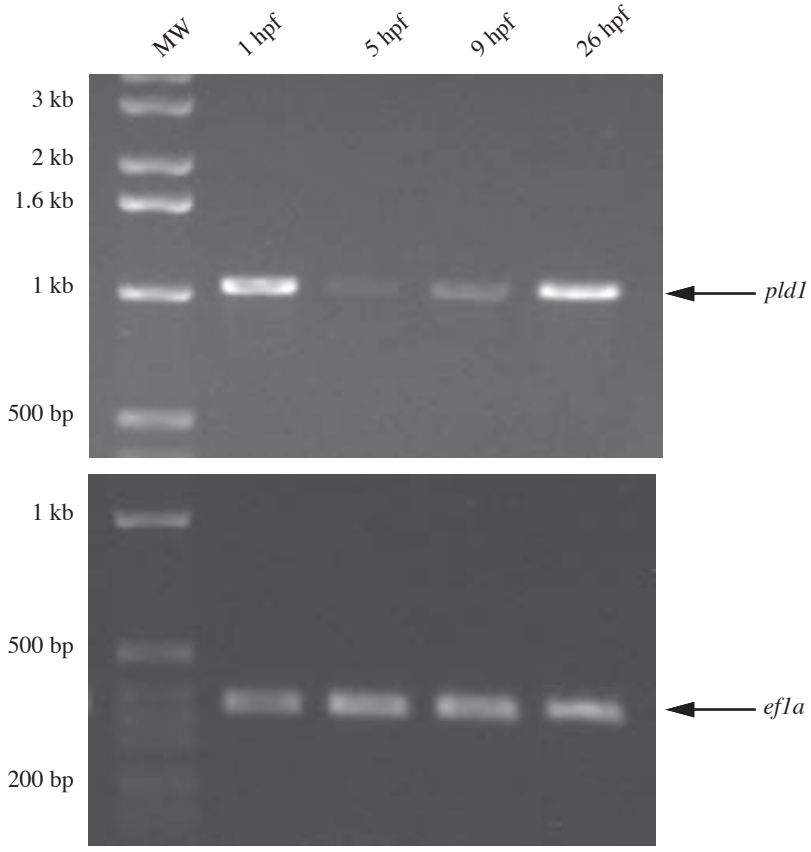

MW
1 hpf
5 hpf
9 hpf
26 hpf
3 kb
2 kb
1.6 kb
1 kb
500 bp
pld1
1 kb
500 bp
200 bp
ef1a

Fig. S2.

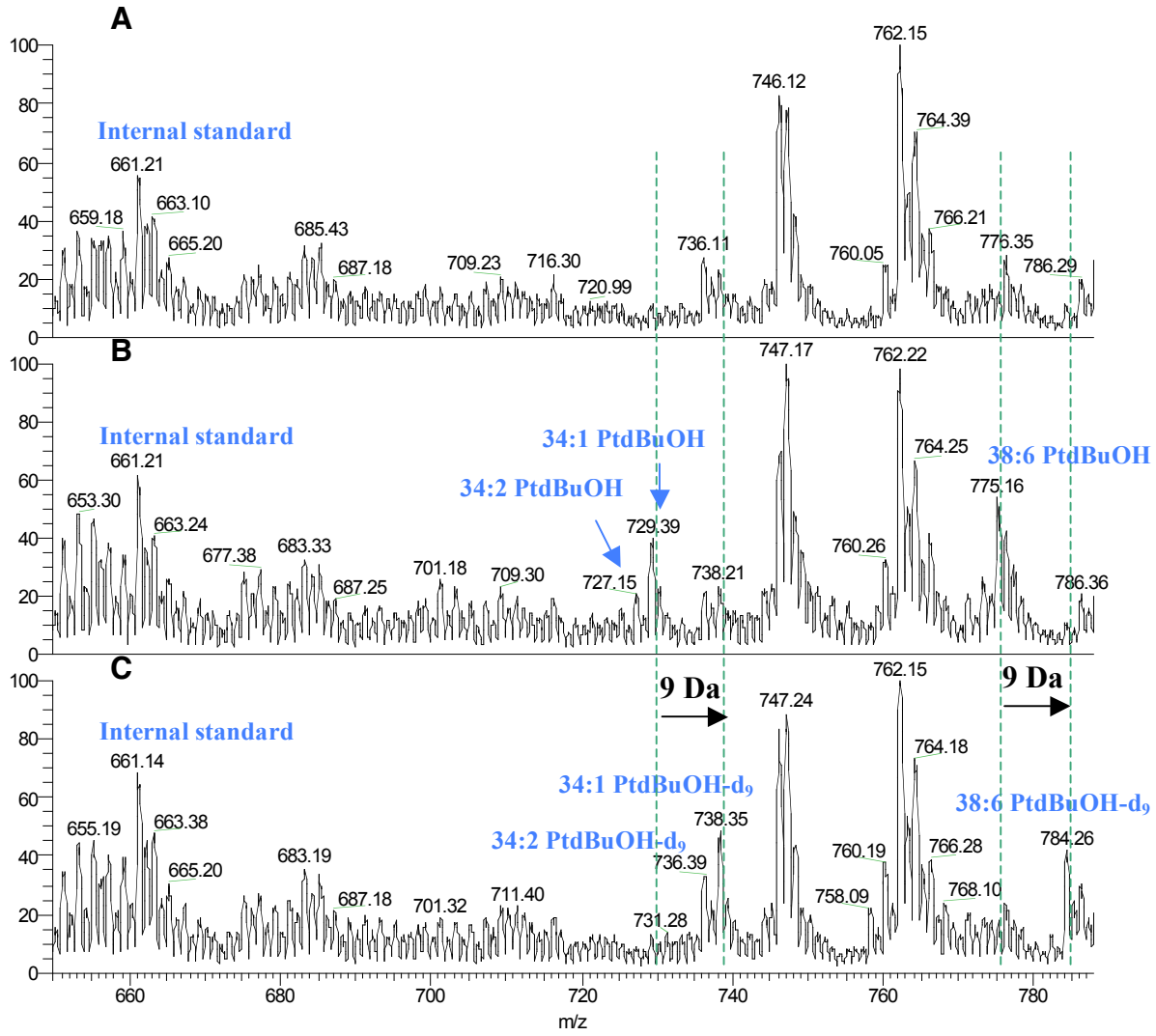


Fig. S3. The endogenous Pld activity assay of the zebrafish embryo.

(A) Mass spectrum of the global phospholipids extracted from the basal (untreated control) zebrafish embryos.
(B) Mass spectrum of the global phospholipids extracted from the embryos treated with PMA and 1-BuOH.
(C) Mass spectrum of the global phospholipids extracted from the embryos treated with PMA and 1-BuOH-d_{10}.

Fig. S4. The MS/MS spectra of the PtdBuOH in the endogenous Pld1 activity assay of the zebrafish embryos.

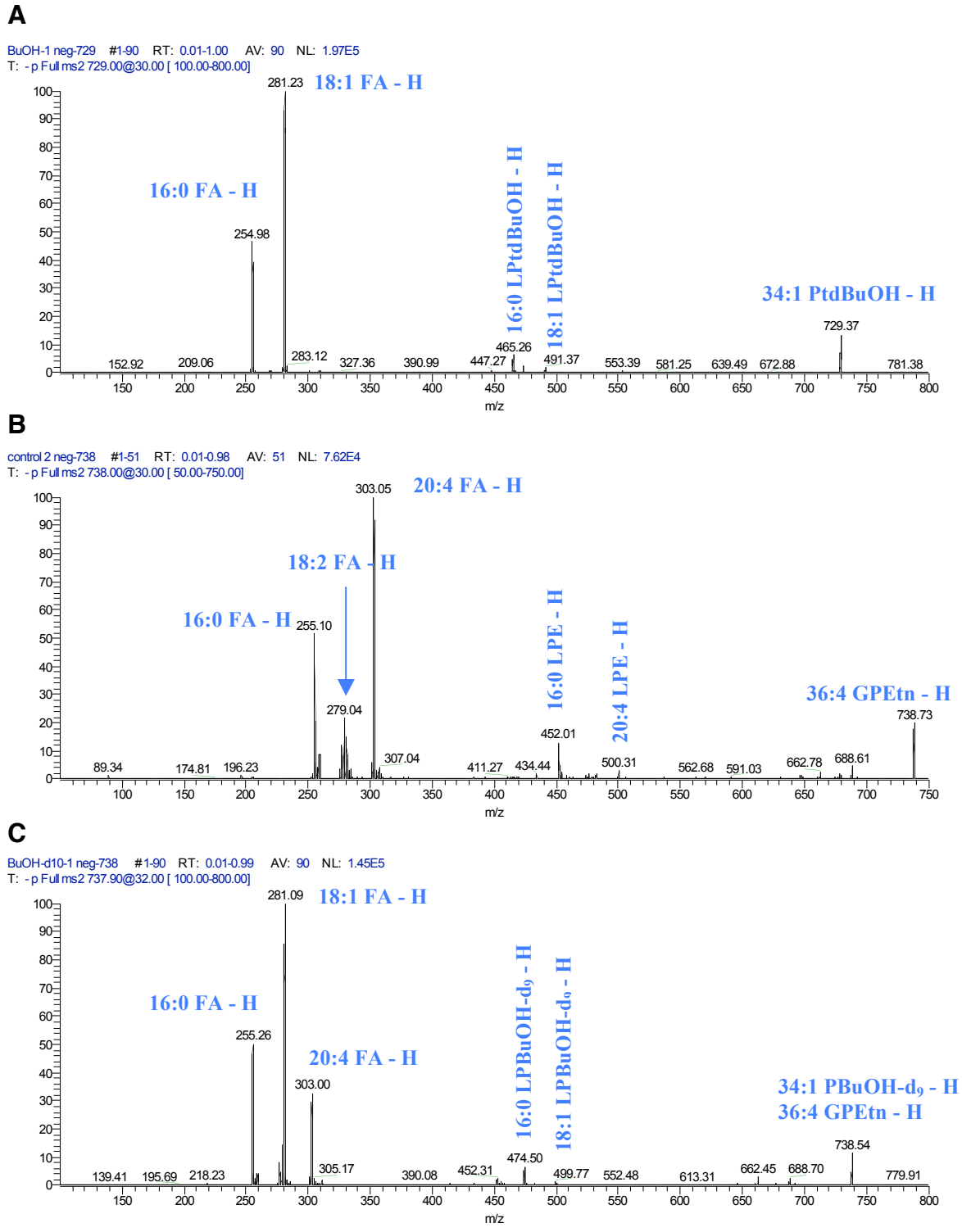
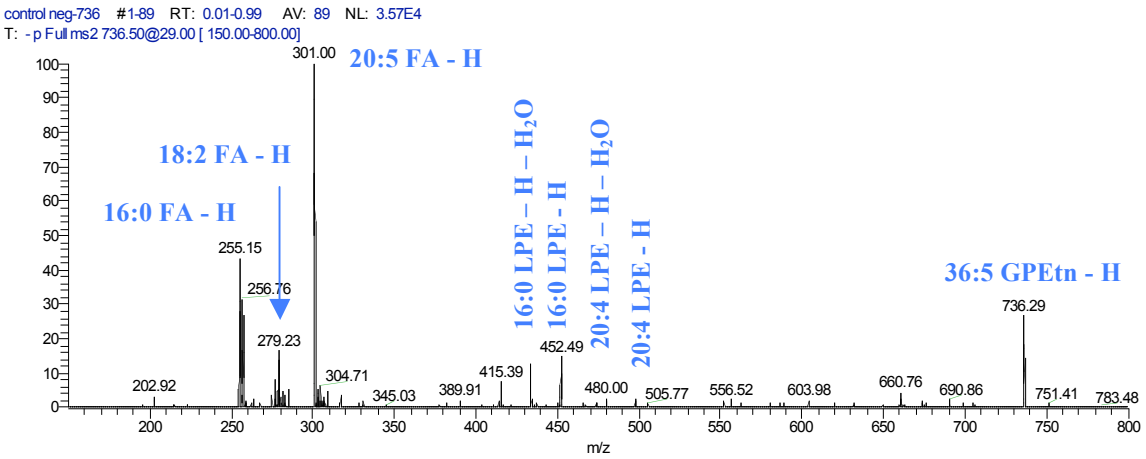


Fig. S4. The MS/MS spectra of the PtdBuOH in the endogenous Pld1 activity assay of the zebrafish embryos.

(A) MS/MS spectrum of *m/z* 729 in the PMA + 1-BuOH treated embryos.
(B) MS/MS spectrum of *m/z* 738 in control sample.
(C) MS/MS spectrum of *m/z* 738 in the PMA + 1-BuOH-d_{10} treated embryos.

D



E

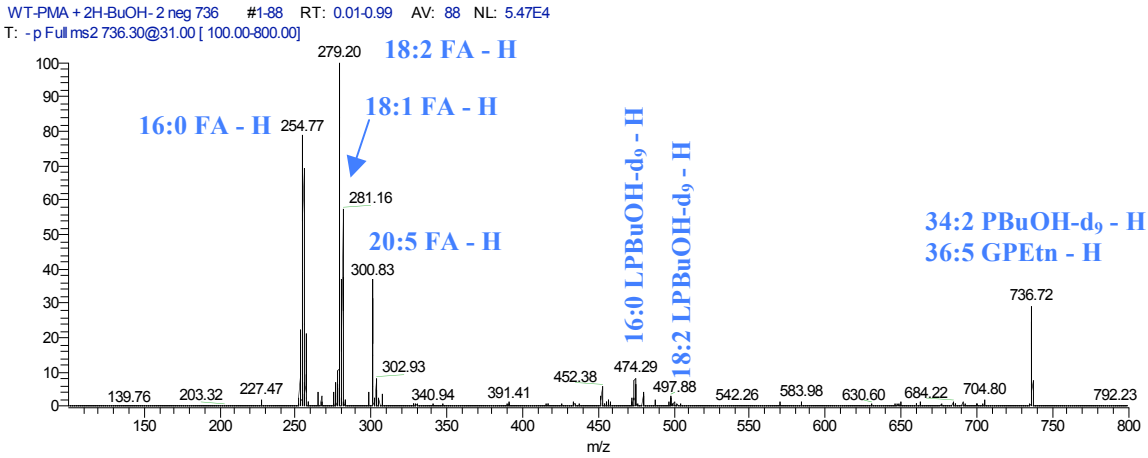
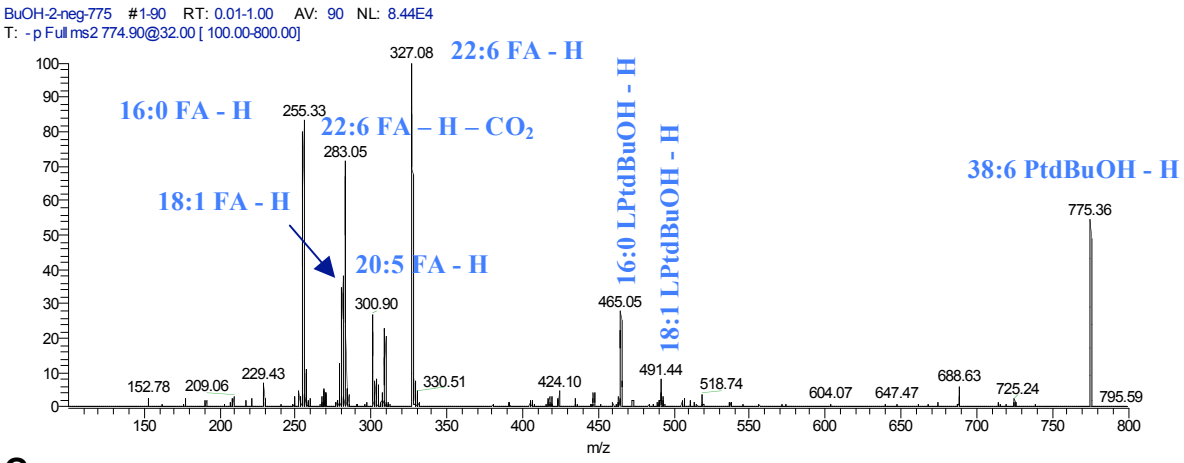


Fig. S4. The MS/MS spectra of the PtdBuOH in the endogenous Pld1 activity assay of the zebrafish embryos.

(D) MS/MS spectrum of *m/z* 736 in control sample.
(E) MS/MS spectrum of *m/z* 736 in the PMA + 1-BuOH-d_{10} treated embryos.

F



G

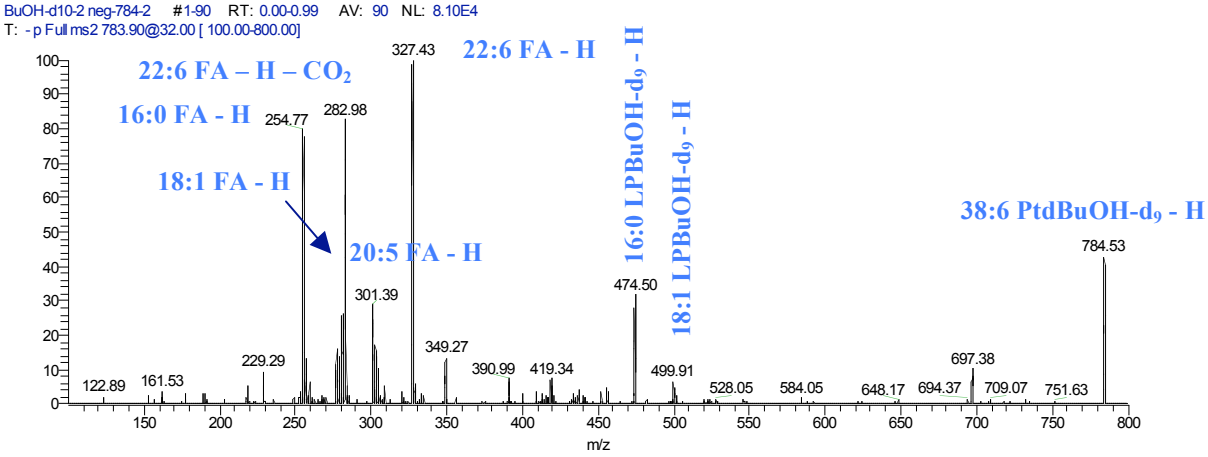


Fig. S4. The MS/MS spectra of the PtdBuOH in the endogenous Pld1 activity assay of the zebrafish embryos.

(F) MS/MS spectrum of *m/z* 775 in the PMA + 1-BuOH treated embryos.
(G) MS/MS spectrum of *m/z* 784 in the PMA + 1-BuOH-d_{10} treated embryos.

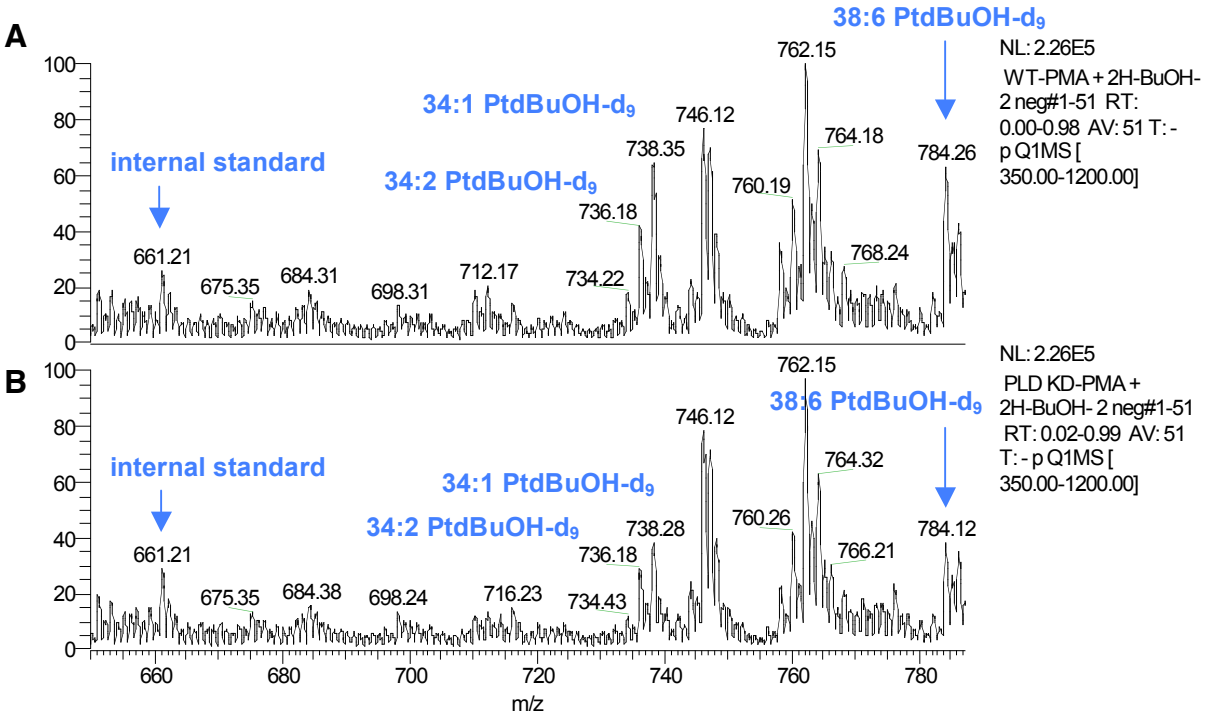
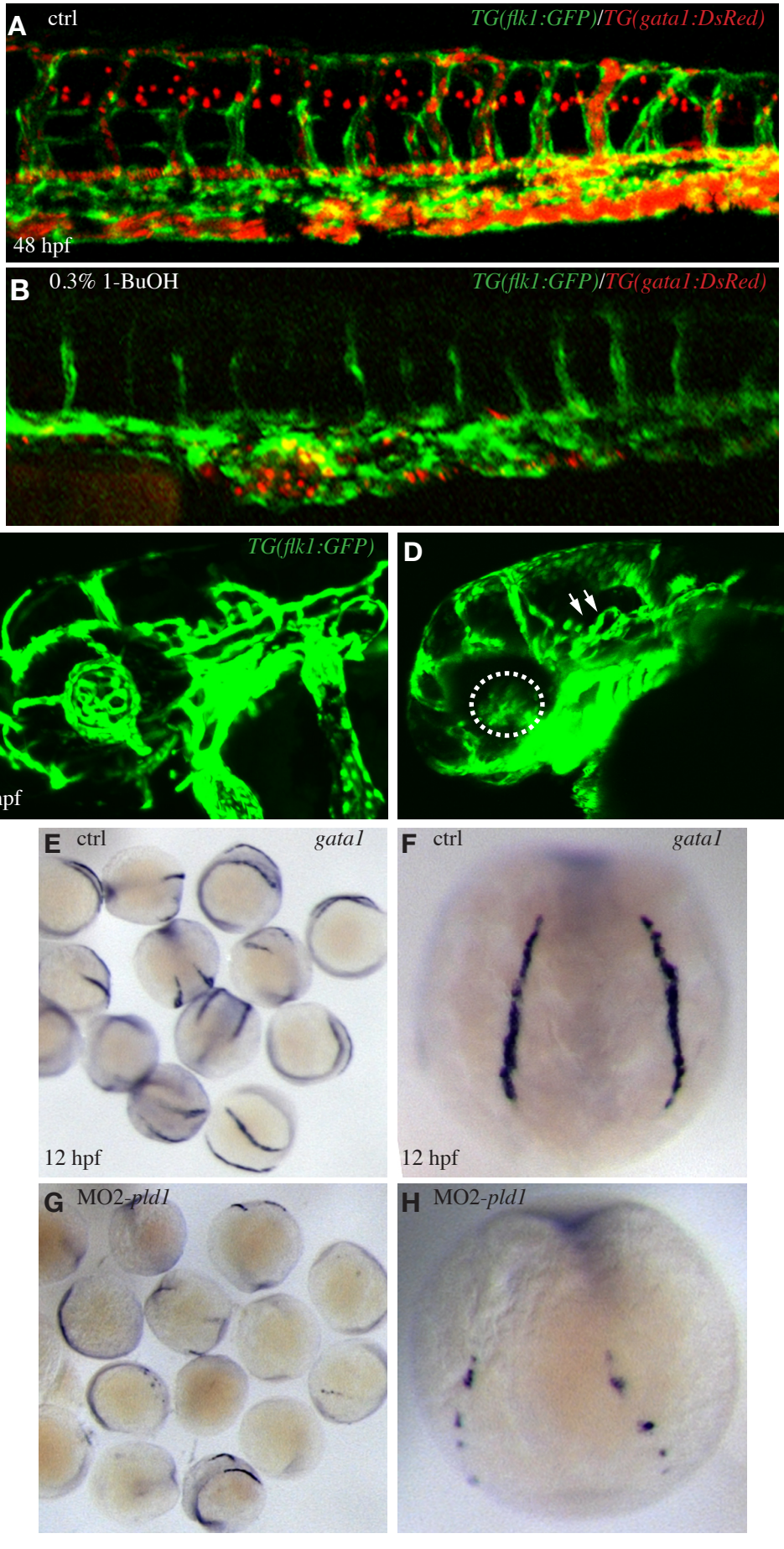


Fig. S5. The endogenous Pld activity assay in *pld1* morphant zebrafish embryos.

(A) The mass spectrum of the global lipids extracted from the PMA + 1-BuOH-d_{10} treated wild type zebrafish embryos.
(B) The mass spectrum of the global lipids extracted from the PMA + 1-BuOH-d_{10} treated MO1-*pld1* injected zebrafish embryos.



supplementary Fig. 6